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A

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EDITED BY
FRANK P. FOSTER, M.D.

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THE NEW YORK MEDICAL JOURNAL, July 3, 1886.

Original Communications.

THE SOUTHERN ADIRONDACKS.*

By EDWARD T. BRUEN, M. D.,

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There are four principal routes by which the Adirondack region can be penetrated: the Ausable route on the east, the Fulton chain from Trenton Falls, the Ogdensburg route, and, lastly, the southern entrance from Saratoga. Thus it happens that one may speak of the southern Adirondacks from its gateway, and yet the district to which I would invite attention lies almost in the center of the Adirondack district. The climate of the Adirondacks has received considerable attention, yet the vicinity of Blue Mountain Lake has been less visited by tourists and invalids than other parts, and I hope to show that the extensive pine forests which are included in this region are a feature which is not possessed by many other portions of this wilderness more generally known. The entire region around Raquette and Forked Lakes is suitable for camps, and is convenient to the base of supplies—Blue Mountain Lake. I feel satisfied that no one should venture to prescribe a residence in any latitude without, if practicable, some personal experience of its merits and defects. It is manifestly impossible for the majority of us to accomplish this, even in a measure. It has, therefore, seemed to me that the statistics and observations I have to offer may be of some interest, as giving a fair idea of a region which is confessedly growing in importance as a health resort.

Blue Mountain Lake lies in a basin formed by the Blue Mountain on the north and a ridge of mountains on the south side. The altitude of the lake is about 1,800 feet above sea-level, and close by is the point of the divide of the Hudson and St. Lawrence water-shed, from which the waters of the Blue Mountain Lake, and the chain of lakes with which it is connected, flow northward.

The prevailing winds are north of west, which is chiefly owing to the basin-like position of the lake in relation to the environing mountains. The northern, western, and southwestern winds sweep round through the northwestern cleft in the range of hills. The eastern and northeastern, however, come in through an opposite cleft to the southeast.

But, however geographical or meteorological conditions recommend any district, there are certain conditions as to housing, eating, and drinking which are necessary to those seeking health, and too often overlooked. How frequently our patients return from southern Colorado or New Mexico with the complaint that a well-regulated and prepared diet was unattainable, some being obliged to subsist exclusively on milk, or go to the expense of renting a house and establishing a private kitchen! Blue Mountain Lake is well equipped to overcome the discomforts which the invalid traveler must encounter. With the exception of Paul Smith's, there is no hotel accommodation which can compare with it in the Adirondack district. The Prospect House is a large building, situated on the southern shore of the lake. A fair idea of the dimensions of the building can be obtained by the statement that a piazza extends 370 feet along the northern and a portion of the eastern and western sides. There is also a wing built from the center of the main building, with a piazza on the southeast 150 feet long. These piazzas, which are 43 feet above the level of the lake, make it possible at all times to secure a sheltered and sunny out-door promenade. The house itself is spacious, with open fire-places in the halls and parlors, and is heated throughout with steam. In this wild region the table, the furniture, and the attendance would do credit to a Saratoga hotel. The Prospect House is naturally the feature of the place as a summer resort; but for winter guests a smaller house has been built, called a cottage, capable of accommodating some thirty or more persons. In many respects this latter house is a more favorable habitat than the larger building. There is furnace-heat in the halls, but each room is provided with an open fire-place, and the compact plan on which this cottage is built insures its warmth and comfort. The piazza is inclosed with glass, an obvious and rare advantage. This cottage is situated to the east of the hotel, on the side of a hill some 75 feet above the lake-level. There are also other boarding-houses and hotels in the vicinity, and numerous private camps, especially as one passes up the chain of lakes.

The claims of the Adirondacks in general seem to rest upon the purity of the air and water, the moderate altitude, their natural beauty, the diversions and attractiveness of forest-life, and their accessibility to those of us who live in the Eastern and Middle States. This region can be reached by train leaving New York at 6.20 P. M., to which, this season, a Pullman sleeper is attached, and this train arrives at 8 A. M. at North Creek, the present terminus of the Adirondack Railroad, some fifty miles from Saratoga. From that point there is a good turnpike, on which quite recently more than $10,000 has been expended, leading directly to Blue Mountain Lake. This ride can be performed by carriage, which will place one at the lake by one o'clock, or the journey can be broken and fair accommodations obtained on the way.

This region of the Adirondacks is virgin forest, mostly pine, thus differing from the Saranac and St. Regis districts, in which the woods are mostly deciduous trees. Moreover, in the St. Regis district and to the eastward the forests have been extensively lumbered, and the ground is barren or covered with small second-growth timber. Common experience has long since determined that the pine woods are a most suitable place of residence for pulmonary invalids. The turpentine exhaled from these pine forests possesses, to a greater degree than all other bodies, the property of converting the oxygen of the air into ozone, and, as this latter destroys organic matter, the air of such forests must be very pure, and consequently conducive to respiration. In addition, the ground, covered as it is with the falling pine, is porous and capable of rapidly absorbing moisture in any ordinary seasons of rain—a fact which many of us have observed in our adjacent resort, Lakewood.

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* Read before the American Climatological Association, May, 1886.

In a paper read before the Austrian Meteorological Society by Schreiber, the *heilende Princip*, or real healing property in climatic health resorts, is, to quote his words, very simple, "being, in fact nothing more than pure air, uncontaminated by miasma, with no organic or inorganic substances, and one in which meteoric precipitation (rain) is not unduly deficient." It has been noticed in the Adirondacks that a beam of sunlight falling through the leaves never shows a trace of dust. Far be it from me to depreciate or undervalue the beneficial effects of other climates which possess well-recognized advantages for those afflicted with pulmonary disease. But I can not refrain from drawing a contrast between the Adirondack atmosphere in its purity with the storms of dry dust so common in the Colorado and New Mexico districts, which may be so dense as to conceal objects like a mist. Schreiber, whom I have already quoted, mentions an illustration of the supreme importance of breathing pure air which is quite striking. In a recent typhus epidemic in Vienna, the physicians, nurses, and others in the various hospitals of Vienna were all attacked with the disease, but in the Rothschild Hospital in the suburb Währing there was not a single instance of contagion, although numerous cases of the disease were treated there. This latter is the only hospital in Vienna which is provided with a ventilator in the cellar, worked with steam, by means of which the air in every room is emptied and renewed.

One must always consider the question of the water supply as of prime importance to any health resort. In many of the Western States much visited by invalids—regions, I repeat, I think highly desirable from many standpoints—the traveler is met by a new danger in the bad character of the water, especially in southern Colorado and New Mexico. At Blue Mountain Lake, the Prospect House is supplied with drinking water from a pure mountain spring, and good water is everywhere obtainable in this region. The altitude of the Blue Mountain region seems to me a feature of some importance. Pasteur has proved that organic substances are much more numerous on the plains of the earth's surface than in the higher strata of the atmosphere, and they continue to diminish the higher we ascend, disappearing entirely when we reach a certain height in the mountains. In the Adirondacks, at a moderate altitude, this atmospheric purity can be obtained and distinct advantages accrue. For instance, it is possible for persons to live in the Adirondacks for certain seasons, and also to spend intervals of selected time in their homes. It is quite the contrary, according to the practical test of experience, for those living in high altitudes to revisit, even for short periods, their native cities. Moreover, the process of acclimatization is not so trying. To take an illustration from the climate of Colorado by way of contrast. It is well understood by stock-raisers that horses taken from the East to these high altitudes must have six months' rest, and small animals sometimes die from the change. Further, I think it probable that great altitude is not a cardinal factor in selecting a suitable climate for pulmonary disease, since phthisis is met with in every latitude, and, on examining the climates of those territories which enjoy more or less immunity from that disease, we shall not only fail to find any analogy in their meteorological character, but even discover in this respect the greatest dissimilarity. Schreiber gives as examples of some of these:

	Latitude.	Coldest month.	Warmest month.	Annual mean.
Akureyri, Iceland............	65° N.	28·40° F.	56·12°	40·10°
Orenburg, in temperate zone..	51° N.	3·93° F.	69·80°	35·96°
Madras, in torrid zone........	13° N.	77·00° F.	88·16°	81·50°

Inquiries instituted in Saxony, at the expense of that government, have disclosed that in the very high localities of Erz and Riesengebirge a large percentage of phthisis developed as soon as the inhabitants turned their attention to the industrial arts, such as mining and the manufacture of china; while, on the other hand, the percentage in the lowlands was diminished when the people were engaged in agriculture and cattle-raising. This result is certainly in consonance with the steady current of our notions as to the ætiology and pathology of pulmonary phthisis.

Thermometrical records have been kept at Blue Mountain Lake, showing the maximum and minimum temperature in the twenty-four hours for three years—viz., 1883, 1884, and 1885. The general average of the temperature reads:

	HIGHEST TEMPERATURE.			LOWEST TEMPERATURE.			Average temperature for 3 years.
	1883.	1884.	1885.	1883.	1884.	1885.	
January	41	40	50	1	....	−18	18
February	49	52	40	1	.....	−12	19⅔
March.	46	62	60	.....	3	.....	25⅓
April................	67	.....	.....	5	....	....	37
May................	79	.....	....	29	....	.....	49
June................	80	.....	. .	35	.....	.....	62
July................	81	82	....	43	37	. .	61
August................	78	84	....	41	34	.....	60
September................	72	80	86	30	30	41	54
October................	80	68	....	17	4	.....	42
November................	64	51	50	11	5	15	29
December................	35	50	45	.....	−28	9	23⅓

These temperature records seem to show that this locality is particularly favorable as a winter climate. The cold is not so great as to interfere with out-door exercise, and yet intense enough to secure a dry atmosphere during the major part of the time. The combination reads: dryness, purity of air, without marked diurnal variations of the thermometer. The western blizzards are unknown, and, although at times the winds are high, yet it does not blow so violently as in certain western districts, while the accommodations are most satisfactory. My records, it is true, show that occasionally days occurred which were not satisfactory—but they were very few. For instance, in 1883 it rained once in January; in 1885 there were four days of rain. In February of 1883 there were two days in which there was some rain, and in December about a similar record prevailed.

The month of March, so disagreeable in other latitudes, is here about the same as December, growing warmer toward April. In 1883 there were only six days of high winds, and in 1885 only three. In the first year, March showed there fourteen beautiful days, and the other years fifteen. Lastly, when April is somewhat advanced, the invalid can retrace his steps homeward. Cold climates suit some healthy persons better than warm, while with others the reverse is true. It is well to take this into account. I incline to think that—individual peculiarities aside—more benefit can be derived from the cold. The characteristics of the summer climate need no comment at my hands; the fly-nuisance is reduced to a minimum by the last of June, and the insect practically vanishes as a plague by the middle of July. I think there are more rainy days in the Blue Mountain region than in the St. Regis, but the woods dry rapidly and the rains are seldom long continued, excepting in September, which in its latter weeks may be rainy. It may also be argued that air is mechanically cleansed by rain and snow, as it is chemically purified by ozone. Rain, as it were, washes out the atmosphere and carries with it to the ground not only its solid particles, but also its carbonic acid and ammonia, so that, unless in exceptional seasons, when rain is long continued, the unpleasantness may be salutary.

If I were to indicate in closing a few observations based on the character of cases which one should select in which to send the patients away from home, it might justly seem as though I could say nothing new on this trite theme. It is a matter of painful experience that persons spend time and money and become exiles from home only to fall victims on the pathway to their El Dorado. In the complex clinical picture so many ætiological and clinical factors appear that it is impossible to consider them briefly. The element in prognosis from the standpoint of pathology is the division of the pulmonary tissue involved and the localization of the disease to a small area. For, even if breaking down of the lung occurs, the limited area involved becomes a prominent prognostic symptom.

The cases most suitable for climatic treatment seem to me to be those in which the lungs are thickened and the vesicular structure not consolidated. In such cases, with or without bronchial catarrh, advantage can be sought from the climate cure—even in hereditary and tubercular phthisis—and I would include in this group cases in which limited local softening has occurred. The patients sent from home must be capable of living out of doors, and this precept often will determine whether one shall choose for a patient a cool, cold, or warm climate, the sea voyage, or the seashore. It would seem that, since chronic bronchitis is often so favorably modified by the sea air, a sea voyage may benefit those cases of phthisis in which the element of catarrhal bronchitis is a prominent factor. At sea the dampness and the high winds do not seem so unfavorable as on the sea-coast, and it is proverbial how the insular climate of small islands (otherwise suitably situated) may often benefit chronic bronchitis.

But it should be borne in mind that, when it is deemed undesirable to send a patient away from home, much benefit may be obtained by suitable attention to domestic hygiene. At home, with proper expenditure in securing appropriate heating and ventilation, with a suitably arranged dietary, one of the prime factors in the treatment of this scourge, one can often secure superior results, and one is tempted to severe reflections upon the misuse of the climate cure.

A CASE OF IMPERFORATE ANUS
OPERATED UPON FOR THE FIRST TIME
ON THE TWENTY-SEVENTH DAY AFTER BIRTH.

By OSCAR J. COSKERY, M. D.,
PROFESSOR OF SURGERY IN THE COLLEGE OF PHYSICIANS AND SURGEONS, BALTIMORE.

On December 10, 1885, I first saw the male child of Mrs. H. He was then twenty-six days old, and the history the mother gave me was as follows: Since birth no evacuation of the bowels had taken place. For the first day or two the child had had some difficulty in nursing, but since then had nursed well, although some of the milk taken into the stomach was generally thrown up. On the fourteenth day vomiting of very offensive matter occurred, and continued until the evening of December 9, 1885—the day before I saw the child. I found a very weak, puny child, with a much distended abdomen, the superficial vessels engorged, and the movements of the intestines plainly to be seen. There was a large accumulation of gas also. Where the anus should have been was a *cul-de-sac* about half an inch in depth. The little finger introduced into this seemed to give pain. No fluctuation could be felt above the *sac*.

On the next day, December 11, 1885, or twenty-seven days after birth, a good-sized cannula and trocar were introduced into the *cul-de-sac* and pushed upward for, probably, half an inch before resistance was overcome. The trocar being withdrawn, about one third of a teacupful of fæcal matter escaped. When all that would come in this way had done so, a probe was passed into the opening made by the trocar and moved freely about, from side to side, so as to increase its size. On December 12th, or twenty-four hours afterward, it was found that, from the time the probe had been withdrawn, no fæcal matter had passed, and the child's abdomen was as distended as before. I now introduced the largest cannula in as near the same line as had been taken before as I could judge, and, upon withdrawing the trocar, a large amount of gas escaped, followed by about three ounces (fluid) of fæcal matter. Again the flow through the cannula ceased, because of the matter being too solid. An effort was made to pass the smallest nozzle of a Davidson syringe. This was unsuccessful. The director, however, found the internal opening made by the trocar, and was passed from side to side again. From that time to 9 A. M. the next morning the child had nine evacuations, and the belly was very much decreased in size. No further operative procedures were undertaken, and, up to December 23d, or eleven days from the last use of the trocar, the child had averaged seven operations in the twenty-four hours, though each one was small, and the abdomen was somewhat distended. The general appearance of the child had, however, greatly changed. It was thriving, nursed well, and had not vomited since the first operation. The mother was instructed to introduce daily into the bowel a blunt instrument to keep the opening made by the trocar patulous.

On January 8, 1886, I saw the child again for the first time since the last operation. I then learned that the evacuations had been regular, except upon one occasion, when a small dose of castor-oil had been given with success, until the day before (January 7th), when only one scanty discharge had occurred. Any attempt to pass a director up the bowel resulted in failure. The abdomen was again greatly distended, the child was very restless and fretful, and vomiting, not stercoraceous, had come on. On January 9, 1886, or fifty-seven days after the birth of the child, the large cannula was again used. Through it, aided by injections of warm water, about half a small teacupful of fæcal matter and a large quantity of gas were discharged from the bowel. A drainage-tube was introduced into the anus, but I could not satisfy myself that it entered the bowel properly, and, on account of the irritation of the external sphincter produced by its presence, it was withdrawn. Very little bleeding followed the operation, notwithstanding the fact that the trocar was introduced fully two inches. I should mention here that the child had wonderfully picked up since the operation of December 12, 1885. It had nursed well, slept well, and greatly increased in size, being now a rather healthy looking child for its age—two months.

January 10th.—Very little fæcal matter had escaped since yesterday. Two directors were introduced and a small quantity came away. By separating the directors the opening was enlarged.

As operative interference seemed to irritate the child, nothing further was done until on January 17th. During this time the abdomen had increased in size enormously, vomiting had occurred after nearly every nursing (simply of the contents of the stomach), and the napkins were only slightly stained. On this date (January 17th, or sixty-four days after birth), under chloroform, a dressing forceps was introduced and expanded. The forceps was withdrawn and the dilator for the female urethra introduced by Dr. Robert T. Wilson, of this city, was passed with some little difficulty. The blades were separated as far as possible (about half an inch), and gas and fæcal matter escaped. The nozzle of a syringe was introduced, and the injection of warm water brought away a quantity of fæces.

18th.—The child has had ten copious evacuations. The belly is flat, he has nursed well, has not vomited since the operation of yesterday, and has slept quietly.

February 1st.—Since the last note the stools have been irregular; sometimes copious, at other times very small and few in the twenty-four hours. On this date the unclosed opening was again dilated under chloroform, so as to admit the little finger, but very little fæcal matter escaped. In the next twenty-four hours the child had six good-sized evacuations, and did not vomit at all (vomiting of small quantities of milk, for a week before February 1st, had been constant).

16th.—Since the last note the stools have been irregular—sometimes five in the twenty-four hours, at other times none. For the last forty-eight hours no stool has passed, and vomiting has returned. The vomited matter is said by the parents to be offensive, but colorless. Again the parts were dilated, under chloroform, and a half-inch-diameter drainage-tube was introduced well into the rectum. The tube was secured in position by means of adhesive plaster, and the bowel washed out with warm water. This brought away a large quantity of fæcal matter and gas. Two hours afterward the tube was displaced and not inserted again. The bowels continued to act well through the artificial anus.

March 2d.—During the preceding two days only one stool has occurred, and with great straining. The parts were again stretched, without chloroform, and, on syringing the bowel, about a gill of fæcal matter was brought away. For the last week vomiting has occurred at times, sometimes offensive (according to the mother's account), but not colored. The abdomen is not very tense, and the child has wonderfully improved in appearance.

17th.—Up to March 9th it was necessary to give injections of warm water in order to relieve the bowels, but since then the child has had unaided evacuations daily, but with some straining. To-day I noticed, for the first time, that the child had the snuffles, and the mother informed me that it had had a "cold" since it was born. The histories of the parents were almost above suspicion, and there were no other signs, but I thought it advisable to prescribe potassic iodide in one-grain doses every three hours. The child has improved since the last note in every way.

24th.—For the last three days very little fæcal matter has been extruded, and the father has not been able to introduce the nozzle of the syringe into the bowel. On this date, again under chloroform, after considerable trouble, I was able to get in the urethral dilator, and expanded the parts fully three quarters of an inch. The fæces were very tenacious, having to be broken up with a director, and then washed out with warm water. In this way about a third of a teacupful was removed. Vomiting, not offensive, mostly of curdled milk, has existed for the last four days, and the abdomen was much distended before the operation. The snuffling has not improved under the iodide.

27th.—Dilatation with graduated bougies was commenced. Very slight improvement since the last operation.

April 1st.—Under the use of the bougies and injections, the bowels are moved two or three times in the twenty-four hours, and the child seems to be doing so well at this time that the parents refuse to allow of further operative measures. No vomiting.

May 1st.—Under the foregoing treatment the child has gained flesh, and, with a few variations, has averaged two evacuations daily.

25th.—The stools are not so numerous or large as some time ago, but the child is passing enormous quantities of water, and is physically improving.

30th.—The child is now having regularly two stools a day without any artificial assistance.

The most important point in this case is the length of time after birth that the child went without any relief from the fæcal accumulation—four weeks.

The literature upon this point, that I have been able to find, is not very large. In Chelius's "Surgery," vol. iii, p. 34, a case is mentioned in which, after an unsuccessful attempt with a lancet, a pharyngotome was introduced on the twelfth day, "and, by the use of clysters and tents, the child ultimately recovered."

In "Lectures upon Diseases of the Rectum," by Van Buren, New York, 1881, on page 365 we find the following: "Ashton reports the case of an imperforate child who died on the eighth day of peritonitis, unrelieved" ("Trans. of the Path. Soc. of London"). Jonathan Hutchinson: "Another case of death on the eighth day, while those in charge were hesitating about an operation."

Bryant, "Practice of Surgery," page 522, says: "Mr. R. Harrison, of Liverpool, records the case of a child who was born with an imperforate anus, and was successfully operated upon in the anal region *thirty-three days* after birth" ("Lancet," February 26, 1876).

Another case is reported in the London "Lancet" of May 15, 1880, in which, on the *thirty-third day*, Mr. Willet punctured the septum but drew off only serous fluid, and the child died of peritonitis.

Surgeon J. S. Billings, U. S. Army, has kindly furnished me the following references to similar cases:

"1. De la Marc. Observation sur l'anus imperforé d'un enfant de six mois. 'Jour. de méd.-chir.,' etc., Paris, 1770, vol. xxxiii, p. 510.

"2. Cleveland. Case of imperforate anus; child lived upward of ten weeks without relief from the bowel after two unsuccessful operations. 'Trans. of the Obstet. Soc. of Lond.,' 1867, vol. ix, p. 203.

"3. Prichard. Imperforate anus; life prolonged to the 102d day without evacuation. 'Prov. Med. and Surg. Jour.,' Lond., 1851, p. 123."

In connection with the cases of late operation, it is, probably, admissible to quote the following from Van Buren, page 365. He says:

> "An infant with complete imperforation is necessarily doomed to early death. This takes place sooner or later, according to its physical powers, generally within ten days, and its immediate cause is peritonitis from over-distension, aided by septicæmic poisoning by the retained excretions."

And again, on page 369, while insisting upon the great importance of seeing that the gut is free, he uses the following language:

> "I repeat this intentionally, for neglect to early discover this variety of malformation will gravely imperil the chances of saving the life of the infant by surgery. Death is *inevitable within a few days* (italics are mine) unless relief is at hand; and, when the child refuses the breast and begins to fret and worry with colicky pains on the third day, changes have already begun which may interfere with the success of surgical treatment."

A CASE OF
EXTRA-UTERINE FŒTATION;
FARADIZATION; RECOVERY.

By GEORGE DACRE BLEYTHING, M. D.

Mrs. M., aged twenty-three, born in New York of German and West Indian ancestry, married. Her family history included cases of leprosy in the West Indian ancestors, and a case of epithelioma of the tongue in a brother, who was operated upon by me at the age of seventeen, and one third of his tongue removed. I had also removed an adenoma of the breast from the patient herself a few months prior to her marriage. She had likewise been treated by me for synovitis of the hip joint, wearing a splint for a number of months with satisfactory results.

On August 21, 1885, I was called to treat Mrs. M. for general weakness, loss of appetite, and inability to sleep. I found her in bed, with a feeble, somewhat irregular pulse, slightly coated tongue, and nervous to a degree that every sudden sound made her start and flush.

The patient informed me that she was pregnant, and imputed her symptoms to that condition. She had menstruated regularly on May 21st, and during the ensuing month she had suffered from constant nausea. For one week, beginning June 20th, she had suffered from a continuous and somewhat copious flow, not attended with the pain usually accompanying her menses. She dated her pregnancy from May because of nausea, and attributed the "flow" in June, and succeeding slighter loss of blood on July 16th and July 21st, to threatened miscarriage.

Examination of the abdomen showed no enlargement of the uterus. The breasts were somewhat large and tender, but showed no areola. By combined vaginal and abdominal manipulation the uterus was shown to be larger than normal, but not corresponding in size to that of a three-months pregnancy. A probe passed with ease into the cavity of the uterus, and seemed to encounter nothing in the interior of the organ.

I disappointed Mrs. M. by assuring her that there was no pregnancy, but a peculiar condition of the pelvic organs which was the probable cause of her ill-health. I could at this time discover nothing extraordinary in the region of the ovaries, and I concluded it to be possible that the products of a conception had passed away with a metrorrhagia, and that a state of subinvolution of the uterus existed.

On August 23d a sharp hæmorrhage occurred. I was able to check it with the application of cold, but it had continued with some activity for four hours in all.

August 26th.—Slight hæmorrhages daily. The patient is kept in a recumbent position, and given fluid extract of viburnum prunifolium to allay uterine excitement.

29th.—More considerable hæmorrhage.

September 2d, 4th, and 7th, I saw the patient. There was noticeable increase in the size of the abdomen during last week, perhaps made apparent by the patient's loss of flesh generally. Examinations that would excite hæmorrhage have been avoided since the first thorough investigation. The patient's desire to be pregnant led her to use the abdominal muscles to stimulate the increase in the size of the abdomen. There was some mammary secretion.

14th.—A sharp hæmorrhage occurred, which was again checked by cold applications. An examination now showed tenderness to the left of and in line with the umbilicus. The uterus had increased in size. The loss of blood had affected the patient so much that the propriety of producing an abortion, if a pregnancy now existed, was considered. She begged for delay, and, as hæmorrhage was checked, she was kept in the recumbent posture, and her request for delay complied with.

Up to September 22d a slight show was found daily, but from this time to October 13th no blood was seen, the patient in the mean time maintaining her horizontal position.

On the evening of October 13th the patient suffered for some hours from sharp, slight pains in the abdomen, and about 8.30 P. M. she was seized by intense intermittent pains. She was drawn up during the paroxysms with her knees to her chin and beat her head on the pillows. Each paroxysm lasted about sixty seconds, and was followed by an intermission of half the duration. Twenty minims of Magendie's solution of morphine were administered hypodermically, followed by thirty grains of chloral hydrate, and, as the pains continued, though somewhat modified in degree, the opiate was repeated in half an hour. In fifteen minutes after the second hypodermic the pains had ceased, and, after watching the patient for an hour, I left, with directions to the attendant to repeat the morphine every second hour if the pains returned, and the chloral on the alternate hours. I was summoned again at 4 A. M., October 14th, the message being that the pains were as bad as before. I arrived at the house to find the patient sleeping, she having had in my absence two ten-minim doses of the morphine solution and one fifteen-grain dose of chloral hydrate. During this day and night sufficient chloral was given to induce light sleep.

On October 18th the soreness of the abdomen from the muscular contractions had so far abated as to admit of a thorough examination.

The fundus of the uterus was now found as high as the umbilicus, and to the left, on the same line, was found an oblong tumor somewhat larger than the unimpregnated uterus. This was very tender, and continued pressure on it produced pain running up the back. Through the vagina the tumor was felt as if it might be the fundus of a flexed uterus.

Through the rectum a tumor could be felt in the line of the left Fallopian tube and connected with the uterus, but the connection was a neck of less diameter than the tumor itself. This tumor gave great pain on pressure.

The patient was seen on October 23d by Dr. Charles McBurney, who made out the conditions as described and verified the diagnosis of extra-uterine fœtation; and, on October 25th, Dr. J. B. Hunter, in consultation, agreed in the location and relations of the tumor.

With Dr. Hunter's indorsement, I applied, on October 26th, a current of faradaic electricity. The application of the electricity was made to the tumor by the negative pole in the rectum, and the positive pole applied externally to the abdomen over the tumor.

The current was regulated by the patient's sensation, and continued for ten minutes as strong as could be borne without positive pain.

The battery was used again on the 27th, 28th, and 29th. On the 30th the application was omitted on account of irritation of the anus from passing the electrode. On the 29th it was thought there was diminution in the size of the tumor, and on the 31st the diminution was in degree about one third of the size of the tumor. On this day Dr. Hunter again saw the patient with me, a week having elapsed since his previous visit.

In his opinion, the tumor had now diminished about one half, and the diagnosis of a fœtus located in the left Fallopian tube was verified, the vitality of the fœtus having been destroyed by the faradaic current. The treatment was now suspended, the patient being allowed to sit up only for her meals, otherwise to maintain her recumbent posture on the sofa or bed.

November 3d.—The patient is doing well, with good appetite, sleeping well, and has gained strength. She is still keeping quiet. The tumor is apparent but of greatly diminished size, and nearly spherical in form. There is slight tenderness on deep pressure upon the tumor.

June 1st.—The patient is quite well. All her functions are restored, and she has resumed her ordinary avocations.

TWO PRINCIPLES WHICH SHOULD DETERMINE WHEN TO OPERATE IN THE NASAL PASSAGES.*

By A. B. FARNHAM, M. D.,

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It is the opinion among many of the medical profession that throat and nose specialists frequently operate unnecessarily. Many recall frenzies which have seized the profession to perform certain operations on different parts of the body, and it is but natural they should suspect the innocent rhinologist and laryngologist of similar madness.

I wish to make clear two principles, the proper application of which will guide us unerringly to the performance or non-performance of any given operation. The first principle is, that all causes of irritation must be removed. The primary application of this principle takes out of the discussion the larger growths and limits it to the smaller hypertrophies of the mucous membranes and to the exostoses and deviations of the septum. These latter play by all means the leading *rôle* in the mucous hypertrophies and degenerations under consideration. From congenital and accidental causes, the growths upon and deviations of this partition are numerous and of exceeding variety and complexity. No matter how numerous or how varied, let them alone unless they are causing irritation, and even then take away only sufficient to fully relieve the pressure and chafing of the opposing membrane. By one or more observations determine the most offending growth or portion of a growth and remove that, and wait, when possible, and see the full result of what has been done. Growths of considerable size projecting into the middle meatus, or elsewhere, where no irritation is caused, can be let alone. If the mucous membrane, when distended, touches a growth, you will almost surely find indications of its doing so by inspection of the membrane in question. Growths or deflections which we would remove or correct in the young we can often let alone in the older, because they have done all the injury they can do and no direct gain will come from surgical interference.

The abnormities of the septum may cause deviations of the turbinated bones and irregularities in the development of the mucous membrane covering them, consequent pressure, irritation, and probably hypertrophy. Note the *point* of pressure and irritation and remove just enough turbinated bone or hypertrophied tissue to relieve this irritation. Nature may do something for what we leave.

The second principle governing our action is the securing of proper drainage and ventilation. Interference with these functions is caused by anterior or posterior stenosis. In my experience the former is more frequently produced by septum growths or deflections, while the latter is more usually caused by growths upon the turbinated bones. Comparatively less frequently is the vomer at fault. Lack of proper drainage causes retention and consequent alteration in the character of the nasal discharges, producing irritation and its train of evils. The backward drainage of the secretions hardly causes the damage alleged for it, as they flow back during our sleep, and in our waking hours a portion of the time, from the position in which the head is held.

Anterior stenosis may cause among its evils a rarefaction of the air in the naso-pharyngeal space from the great current being taken in through the mouth and consequent suction upon the membrana tympani, and partial deafness. The original stenosis is also increased owing to the weakening or atrophy of the dilators and consequent falling of the cartilages of the alæ nasi against the septum. Whatever may be the cause of interference with proper drainage and ventilation, remove it in the careful conservative way hinted at above.

As this involves operating on the septum, I should like briefly to put on record the method of moving over this partition which my experience has led me at present to think the most desirable. Do not use punches. With the small burr of the dental engine the wall can be weakened exactly where one wishes; there will be less hæmorrhage, and the membrane on one side will be absolutely uninjured, a matter of great importance.

If an angle is attacked, the burr can be supplemented by the nippers or forceps and any desired portion of bone or cartilage removed, leaving the membrane on one side absolutely intact. Generally the convex surface is attacked, but in broad curves the concave surface may be operated on and the desired pressure applied on the uninjured side. The work can be finished, if need be, under ether by the use of Smith's forceps, though my fingers almost invariably serve me best. The attractiveness of this method is its absolute exactness. An appreciation of the exact requirements of each case and a more or less delicate touch are required. The after-treatment should include cotton plugs, digital pressure, and care and patience *ad libitum*.

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* Read before the Wisconsin State Medical Society, June 1, 1886.

A CASE OF DIFFUSE OSTEO-MYELITIS,

WITH REMARKS UPON THE PARASITIC ORIGIN OF THE DISEASE.*

By GEORGE R. FOWLER, M. D.,

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In bringing to your attention the subject of the parasitic origin of the disease commonly known as osteo-myelitis, I desire to preface my remarks by the history—as yet incomplete, to be sure—of an exceedingly interesting case of the disease, which has been under my observation for the past year and a half in my service at the hospital. I will also exhibit to you the patient and a specimen of the bone removed by operation. The subject of the affection under observation, Eddie B., aged seven, born in the United States, of healthy parents, was admitted to the hospital October 7, 1884, and the following account of the case was derived from his father:

A short time before his admittance the boy stepped upon a nail while at play in the street. The punctured wound, situated at about the center of the plantar surface of the os calcis, was an exquisitely painful one from the beginning, and the family practitioner ordered it to be poulticed, which order was most faithfully carried out; suppuration rapidly supervened, occasioning several spontaneous openings. He had always been a healthy, rosy-cheeked boy, but within a short time after the accident, owing to excessive pain and profuse discharge from the wound, his health rapidly broke down, and he emaciated considerably. His status on admission was as follows: The foot was extensively swollen, ichorous, offensive pus exuding from several apertures. Both elbow joints were swollen and tender, with enlarged veins plainly discernible. At the inner third of the right clavicle and extending to the sterno-clavicular articulation there was found a swelling of the size of a hazel-nut, and at the site of the inner extremity of this an opening having the characteristic appearance of leading to diseased bone. This supposed condition was verified by the probe, and the same state of affairs was found to exist at the bottom of the sinus in the foot. The slightest attempt at moving the elbow joint at once occasioned the most excruciating pain.

On October 22d each elbow joint was punctured with a trocar and cannula, and a small quantity of grumous, purulent material removed. Following the punctures, thorough irrigation with a warm solution of mercuric bichloride was practiced until the irrigating fluid returned clear, after which the punctures were dusted over with iodoform, an antiseptic dressing was applied, and the arm and forearm were supported by angular wire-cloth splints. No reaction followed the invasion of the joints, and the small punctures soon healed.

The right elbow joint showed some improvement after ten days, the left one perhaps rather less. Movements of the arm on either side could be made with less discomfort to the patient.

On December 8th Syme's amputation of the foot was performed, and the sinuses were thoroughly curetted with Volkmann's sharp spoon, the largest sinus being utilized in passing a rubber drainage-tube through the most depending portion of the heel-flap. Much to my surprise, the line of coaptation healed perfectly by first intention, and even the old sinus through which the drainage-tube passed closed rapidly after its withdrawal. No suppuration occurred, and this was attributed to the thorough carrying out of antiseptic precautions in everything pertaining to the treatment of the operation wound. Within three weeks after the removal of the foot the parts had thoroughly healed, and the boy had markedly improved in health. His appetite returned and he gained considerably in weight.

On January 15, 1885, excision of the entire right clavicle was performed. Its periosteum was easily peeled away and the bone lifted from its thickened investment. Here, also, surprisingly rapid healing ensued under antiseptic treatment, union by first intention occurring along the whole line of incision except where the drainage-tube emerged. Prompt closure of the opening occupied by the latter followed its removal. Following these operations the little fellow improved wonderfully in general health, and for a while it seemed as if the disease had spent its force. It was observed that new bone was forming at the site of the removed clavicle; the elbow joints were diminished in size, and seemed more freely movable.

The hopes thus encouraged, however, proved to be delusive, for it was noticed that an enlargement of the remaining clavicle was taking place, and also that the right radius was becoming involved in the disease. The latter soon presented a decidedly fusiform enlargement, and several openings appeared.

On July 13th an incision was made down to the left clavicle, which was found to be the seat of a central necrosis. An opening which was discovered leading down to a loosened sequestrum was enlarged, and the latter removed. The cavity was thoroughly curetted, washed out with a mercuric-bichloride solution, insufflated with iodoform, a drainage-tube inserted, and a dressing applied in the usual way. Suppuration followed, but this finally ceased, and in about three weeks the wound closed.

On September 14th the operation for the excision of the entire radius was performed. A long incision was made on the radial border of the arm, somewhat inclined to its posterior surface, in order to connect two large sinuses, the one near the head of the radius, and the other at the lower end near the radio-carpal articulation. The bone was sawn across in the middle of the shaft, and each portion removed separately. The head of the bone was found to be loosely attached to the soft tissue, and detached from the shaft and removed separately. The lower epiphysis was likewise found to be detached, and, as the portion of bone adjacent to the epiphyseal line looked comparatively healthy, it was determined to leave this fragment *in situ.* Some difficulty was experienced in thoroughly curetting the lining of the larger sinuses, for the reason that both approximated important articulations, and it was deemed important not to open into the latter. Some suppuration followed the operation, and union only took place in about one half, in the aggregate, of the line of incision. This was attributed, in part, to the circumstance just mentioned, and the fact that some irritation and excoriation ensued, due, doubtless, to a profuse use of pure hydronaphthol along the line of incision. Complete union, however, finally occurred, the case after the third day pursuing an apyretic course. This arm soon became decidedly the more useful of the two members.

Following the excision of the radius and the operation upon the left clavicle the patient again improved, the improvement being the subject of general remark.

Again it was thought that the case was in a fair way to cease making clinical history, and again these hopes failed of realization. The right ulna and humerus now became the seat of infiltration and deposit, and sinuses formed leading down to diseased bone at the upper end of the forearm and the middle of the shaft of the humerus. Simultaneously the left half of the body of the inferior maxilla and the right superior maxilla became involved. An attempt was made to eradicate the disease in connection with the right humerus and right ulna by chiseling a groove in the bone and scraping the medullary cavity for a considerable distance above and below the seat of disease. These operations, however, proved to be of no avail, and the sinuses marking the site of the disease in these localities remain as before. In the mean while fresh evidences of the activity of the morbid process underlying this persistent and successive involvement of bone-tissue were afforded by a swelling over the sternum, which rapidly ulcerated, and an enlargement of the skull over the anterior fontanelle. The case was manifestly a hopeless one, and further operative treatment was abandoned.

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* Read before the Brooklyn Pathological Society, May 16, 1886.

In October, 1885, Dr. Hermann Biggs, instructor in the Carnegie Laboratory, visited the hospital, upon my invitation, for the purpose of obtaining, if possible, cultivations of whatever micro-organisms might be found in the discharges of the sinuses of this case. The cultivating medium employed in this case was sterilized gelatin kept in glass tubes, their openings being tightly closed by cotton plugs. A fine platinum needle was first sterilized by being passed through the flame of a spirit-lamp, and subsequently plunged into the bottom of two of the deepest sinuses. The cotton plug of one of the tubes was rapidly removed and the platinum needle, covered with the secretion of the diseased bone, quickly passed into the gelatin contained in the tube, the needle withdrawn, and the cotton plug instantly replaced. This manipulation was repeated several times till a number of tubes were thus charged. The propagation of the germs was carried on in the Carnegie Laboratory, and the following is the substance of the report furnished by Dr. Biggs: Owing to the unfavorable surroundings and the fact that the secretions had been exposed to the air, a majority of the cultivation-tubes became infected with germs from the latter, and hence were worthless. Two of the number, however, proved to be pure cultivations of micrococci. These latter were of two species, the first being the *Staphylococcus pyogenes albus*, and the second the *Staphylococcus pyogenes aureus*.

It has long been a matter of observation among surgeons that, excluding from consideration cases of osteo-myelitis complicating fractures and following amputation, most cases of the disease occur during the earlier period of life, while the skeleton is yet in the process of development. A predisposition to inflammatory changes seems to be inherent in the young bone, during the period of physiological growth. The fact that in the majority of cases of acute and chronic osteo-myelitis the changes begin in the youngest medullary tissue, or that lying adjacent to the disc of epiphyseal cartilage, gives substantial support to the acceptation of this view. Further than this, and aside from such general predisposition, the question naturally arises as to the exciting or special cause or causes of the peculiar changes which the medullary substance undergoes in this affection. In other words, have we here, as elsewhere, to deal with an agency which may be specific in character, such as pathogenic germs, and, if this can be answered in the affirmative, what is the method of their propagation, and in what manner do they find entrance into the tissue?

Numerous accurate observations have been made upon subjects dead of this disease, and both Lücke and von Recklinghausen have succeeded in removing portions of the contents of diseased medullary cavities without allowing them to come in contact with the atmospheric air. In these have been demonstrated, and from them developed, both cocci and bacilli. Their presence in these closed cavities can only be accounted for upon the supposition that they have been carried into the medullary tissue by the blood-current, and that they have their origin in some portion of the body where foci of infection have resulted from previous infection, through the medium of the mucous membrane of the respiratory or digestive tract. The clinical facts seem to agree with the theory that the mucous membrane just named may be the medium of infection, and it may also be pointed out that the mucous membrane does not always escape the effects of the presence of these micro-organisms, for authenticated instances are known where bronchitis and enteritis have preceded the development of osteo-myelitis (Kocher).

That suppurative disease of the medullary structure is due to the presence of some parasite requires but little argument beyond the simple allusion to the experiments of Ogston upon the causes of suppuration in general, and particularly to that portion of his observations relating to the presence of micrococci in the pus of abscesses previously unopened, to place this theory upon a sound basis. Pasteur, in 1880, had found in a furuncle a micrococcus corresponding to that of Ogston, and likewise in pus from suppurating inflammation of the medullary cavity of bone—viz., osteomyelitis. Pasteur's researches were not directed particularly to the study of osteo-myelitis; hence his conclusions may be said to be based upon insufficient observation regarding this particular disease, he having examined but one case. In this, however, the broken-down medullary substance as well as the pus was literally swarming with micro-organisms. In the following year, however, Schüller confirmed Pasteur's observation in relation to the presence of micro-organisms found in previously closed medullary cavities of bone, the subject of suppurative inflammation.

To Kocher, of Berne, however, belongs the credit of having first attempted, in a systematic manner, aided by experiment, to establish the parasitic origin of osteo-myelitis. In the first place, it was established by this observer that the injection of caustics and substances of an irritant nature generally into the medullary canal of bones of dogs did not, when performed antiseptically, produce osteo-myelitis. No suppuration followed, and whatever irritation and subsequent inflammation occurred led only to a general hardening or sclerosis at the site of inflammation. The next experiment consisted in injecting putrid fluids into the medullary cavity of bone in animals, when in some instances, yet not in all, osteo-myelitis followed. The materials employed were not derived from pure cultivations, but had putrified in closed vessels, and were found by Kocher to contain principally a long form of bacilli, bearing spores at their extremities. This experimenter seems to have arrived at the conclusion that the disease depended upon the presence of spore-bearing or other micro-organisms identical with agents producing putrefaction. He gives no definite description and attempts no classification of the organisms which he found in the pus resulting from osteo-myelitis produced in his trial-animals. In the light of investigations by later observers, and from the fact, as before stated, that Kocher did not employ pure cultivations, but simply putrid material which had solely been protected from the access of oxygen, and, in addition to these, the only occasional occurrence of osteo-myelitis, it is fair to assume that some of his injections contained pathogenic germs purely accidentally. These pathogenic germs may have been few in number, for, even in cases where the injections were not entirely innocuous, a genuine osteo-myelitis did not follow. The successfully inoculated cases showed considerable diversity likewise as regards intensity. The conclusions of Kocher, although not decisive, are still very suggestive, and may lead the way to a more elaborate study of the disease.

In one of the latest contributions upon the subject of micro-organisms and their relation to wound infection, that by Rosenbach, of Göttingen, the *Staphylococcus pyogenes aureus* is viewed as being, in all probability, the special agent in the production of acute infectious osteo-myelitis, although the *Staphylococcus pyogenes albus* was also found by both Rosenbach and Garié, the latter observer describing it as coursing in the blood. This fact is of special significance, and interesting in connection with the circumstance that septicæmia is not an infrequent complication of acute osteo-myelitis. These organisms, injected into the pleura or knee of a rabbit, produce, as a rule, a fatal result within twenty-four hours. This was particularly true of the orange-yellow variety. If the latter be injected into the knee of a dog, suppuration and rapid disintegration of the joint follow. The staphylococci are not identical with any of the known forms causing putrefaction, and, indeed, it has been shown that in pus, when alone present, they do not cause any septic odor. Besides being invariably present in acute osteo-myelitis, they have been found in the pus of boils and abscesses of pyæmia, and also in puerperal fever. The most deadly effects follow upon their injection into the jugular vein of animals. They seem to have an elective affinity, so to speak, for any inflammatory condition in and about bones. It was found that if a small quantity of a cultivation was introduced into the jugular vein of an animal after previous fracture or contusion of a long bone, the animal perished in about forty-eight hours, and abscesses were found in and about the bones at the seat of injury and, in some cases, in the lung and kidney. The blood was also shown to contain similar cocci.

In view of the facts as here presented, and which are believed to represent our present state of knowledge upon the subject, the explanation of the *modus operandi* of these organisms in the production of osteo-myelitis appears to be somewhat as follows: It is believed that the micrococci find an entrance into the system at first by means of an accidental lodgment upon an abraded mucous membrane, a solution of continuity of the integument, or wounds of the soft parts. As before stated, the first infection upon a mucous membrane may give rise to an inflammation of the same—this, of course, preceding the development of the bone lesions. It is believed that the spores or germs are first arrested at some point where a more or less temporary stasis occurs, and that here, by their influence upon the corpuscles, causing the latter to adhere, they form thrombi from which fragments may be torn off by the blood-current and carried along until caught in some vessel too small to permit of their passage. Should these embolic masses lodge in the localities which will furnish the best pabulum for the growth and development of their contained cocci—such, for instance, as the young marrow adjoining the epiphysis of a long bone—they grow rapidly after lodgment in these vessels. Or, without the formation of thrombi or the intervention of emboli, the micrococci may be carried directly by the blood-stream until arrested in the locality just mentioned, there forming a colony of their kind, the presence of which is made manifest by their characteristic effects in the production of tissue-changes. In the case of the micrococci of Rosenbach, the *Staphylococcus pyogenes aureus* and *Staphylococcus pyogenes albus*, there seems to be an especial tendency to development in the medullary structure, and perhaps this occurs with greater facility in the youngest portion of this tissue or that which lies adjacent to the epiphyseal cartilage. The delicate network of vessels lying in the cancellous tissue becomes easily blocked, as well as the vessels of the medulla, and here the micrococci become arrested and find the pabulum, in the highly nutrient medullary tissue, most favorable for their development. An endostitis quickly results from the presence of the growth of parasites, and suppuration follows. The ordinary changes of osteitis, with or without necrosis, now follow. Sometimes the inner shell of bone becomes separated from the outer portion and a sequestrum is formed, although the disease more frequently confines itself to the medullary canal and affects this in its entire length.

Cases of apparent spontaneous origin of this disease, without abrasion or traumatism of any kind preceding the development of the bone disease, like the cases of so-called spontaneous pyæmia, only seem to strengthen the clinical evidence of the bacterial origin of these septic diseases. Perhaps a closer scrutiny of these cases of supposed spontaneous pyæmia would reveal a source of infection. I recall a fatal case in my own practice in which a suppurative disease of the antrum proved to be the focus of infection, and Weichselbaum has reported a similar case. At all events, the metastatic abscesses of pyæmia always contain bacteria, and, in every instance of osteo-myelitis in which search has been made, the staphylococcus in one or the other of its varieties has been found. In the majority of instances it is the orange-yellow variety that has been found constantly present. In a few exceptional instances the white variety was present alone.

For the cultivation tubes of the staphylococcus, and the beautiful microscopical mountings of the same, I am indebted to Dr. Hermann M. Biggs, of the Carnegie Laboratory, who has kindly placed them at my disposal for the purposes of this paper.

Lafayette College, of Easton, Pa., has conferred the degree of LL. D. on Dr. Henry D. Swift, of the University of Pennsylvania, and the degree of A. M. on Dr. J. Clinton Edgar, of New York.

MECHANICAL SUPPORT IN UTERINE DISPLACEMENTS,

WITH REFERENCE TO THE MANAGEMENT OF CERTAIN COMPLICATIONS.*

By WALTER B. CHASE, M. D.,
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Among the vexatious cases which occupy the time and tax the patience and skill of the practitioner are those of uterine displacements requiring mechanical support, in which oftentimes the use of pessaries will not be tolerated.

There are physicians who have discarded the use of all mechanical aids in the treatment of uterine displacements and boldly assert that they should never be employed. No argument will be entered upon to prove their position erroneous, and it is assumed that mechanical support, when properly applied, is not only useful but indispensable. If we were to know their experience and the reasoning by which they arrived at their conclusions, it would probably reveal the fact that the cases in which they failed and were disappointed (and who of us has not frequently met with failure and disappointment in like circumstances?) were those in which no support was indicated, or that the kind of support was not adapted to the case.

While a very considerable proportion of the cases of uterine displacement admit of easy and successful management by the use of pessaries, without preparatory treatment, there are cases, not primarily allowing of rigid mechanical support, which, as regards the methods to be employed, will be the principal topic of this paper, including some allusion to certain errors in the diagnosis of uterine displacements, and the methods to be adopted in their treatment, with brief mention as to some contra-indications for interference.

There are cases of uterine displacement, more or less pronounced—particularly that of anteflexion in girls at the menstrual period, in single women of more mature years, and in those who are sterile—in which the differentiation between the pain and discomfort which arise from such displacement and those of a true neurosis require careful study and close discrimination, and, as elsewhere in pelvic diseases, accurate differentiation is always requisite to intelligent and rational treatment.

The varying mobility of the uterus in different women in health is a subject worthy of careful consideration, and, as there can be no fixed standard for judgment, the limit of normal mobility in every individual case must be determined by the observer, and the treatment governed accordingly. This will embrace a correct estimate of the causes and forces, both local and general, which enter as factors in the production of these displacements, and include accurate knowledge of the appropriate methods of relief, and skill in their application and adaptation.

Just here all the tact of the physician will be called into requisition, and nowhere in the domain of medicine will the knowledge and skill of the attendant be placed under larger and more exacting contribution.

The diagnosis of uterine displacements is commonly reached by a study of the symptoms subjectively and objectively, together with a pelvic examination, manual, bimanual, and, it may be, instrumental, made when the patient is lying down. The question of uterine fixation, the results of adhesion and peritoneal and cellular exudation, with organization of inflammatory products—which is of the *highest importance*—may be properly estimated with the patient upon her back or side; but the conclusion as to the degree of mobility, particularly mobility with displacement, and the displacement for which the patient seeks relief, is not always so accurately decided upon.

If the case is one of anteversion without fixation, a supine position, allowing gravity to operate, tends to return the uterus to the normal position, and in some cases will correct the displacement; and, *vice versa*, in a case of retroversion the prone position may, by the operation of the same law, correct the uterine axis, while a patient in the Sims position, with the vagina distended after the introduction of a Sims speculum, if the uterus is mobile, may give evidence of lateral or forward displacement, which is apparent rather than real.

As most patients with uterine displacements have the maximum of pain and discomfort when in an upright position, the final estimate of the degree of abnormity of position can best be decided upon when the patient is examined standing. This is particularly true in prolapsus, and failure to make such an examination is, I am satisfied, a cause of serious error in estimating the degree of falling, the amount of resistance to be overcome, and the support required to correct the displacement.

The influence of visceral pressure from above in carrying the uterus downward while the patient is standing—which is oftentimes far more pronounced than when the patient is lying down — seems to have been overlooked or improperly estimated by many as a factor in procidentia.

Apropos of this I recall the case of a lady who became my patient eighteen months since, suffering from all the subjective symptoms of prolapsus uteri.

She had been under the care of a very intelligent physician, who had repeatedly examined her with a speculum while she was lying upon her back, and had given his unqualified opinion that her uterus was in a healthy condition, and that there was no displacement.

A digital examination with the patient upon her back gave little evidence of displacement, but, while she was standing, I could demonstrate to my own and the patient's satisfaction that there was marked descent of the uterus, resting as it did upon the floor of the pelvis; and this was accompanied by characteristic pain, which was instantly relieved by lifting the uterus, thereby relieving the utero-sacral ligaments of strain and tension.

While every case may not require such an examination to perfect a diagnosis, its use should not be forgotten nor neglected, if doubt or uncertainty is present.

There are frequently cases, and the ones to which I desire to call special attention, in which some of the various forms of displacement are present, which admit of correction by appropriate methods; but, when a rigid pessary is applied to prevent a recurrence, the patient suffers pain, and serious risk of exciting inflammation is invited.

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* Read before the Medical Society of the County of Kings, April 20, 1886.

Suppose it is a case of retroversion which is easily corrected by Elliot's replacer or bimanual palpation, aided by position, and yet the kind of support applied—probably a Smith's retroversion pessary—will not be tolerated, what is to be done?

After gently correcting the malposition, with the patient either in the Sims position or, better still, the knee-chest position, that gravity may more effectually aid the reduction, introduce into Douglas's *cul-de-sac* one or more pledgets of cotton moistened with glycerin, to which has been added one or two per cent. of pure carbolic acid (it being of great importance that the glycerin used be pure, and not the ordinary article of commerce), with a small piece of thread attached to each, so that, if circumstances require, the patient can be instructed to remove them.

If properly placed, and giving comfort by overcoming the displacement, they may be allowed to remain two or three days, when the attendant will remove them and apply fresh ones.

Such a method of elastic support, kept up for a period of a few days or a few weeks, may have been sufficient to effect a cure; or, if more permanent support is required, it will often be found, after pursuing such a course of treatment, that an appropriately fitting pessary will be tolerated without the least inconvenience to the patient. If there is some engorgement of the uterus, the osmosis excited by the glycerin, as evinced by a free watery discharge from the vagina, will act as a powerfully curative agent by depleting local congestion and restoring the circulation to a normal condition.

In cases where evidence of inflammation and congestion is wanting, a cotton tampon, covered with gutta-percha tissue, is light and elastic, and, when properly sealed, as it may be by a little practice from the heat of a match or the flame of a gas jet, is almost or quite impervious to moisture, can be applied and allowed to remain for several days without becoming contaminated by the vaginal secretions, and, as in the other case, can, if necessary, be removed by the patient by having a silk thread attached.

Sometimes, where a condition of hyperæsthesia obtains, the use of iodoform, applied with the tampon, exerts a sedative influence, and prepares the way for more positive measures of support. The use of cotton tampons, either dry or moist, with or without the gutta-percha covering, as circumstances may indicate, is simply invaluable, being easy of application and attended with little or no risk, and ordinarily without discomfort to the wearer.

Cases present themselves where there is marked vaginal relaxation associated with the displacement, in which the tampon should be moistened with glycero-tannin or fluid extract of *Pinus canadensis*, where the combined alterative and astringent action is attended with results the most satisfactory.*

The preparatory steps to more positive support in prolapsus, to a ring pessary, or occasionally to a stem pessary, can be accomplished by several pledgets of cotton under and, if required, anteriorly, posteriorly, or laterally to the cervix.

If a lacerated and everted cervix or ruptured perinæum is present to complicate the situation, the first steps toward a radical cure may consist in its repair.

The former, by inducing uterine hyperæmia, adds to the weight of the uterus and carries it downward, while the latter, by taking away from underneath the normal support of the pelvic organs, brings on prolapsus, anteversion, rectocele, and vesical tenesmus, with a train of symptoms and consequences which, in some women, make their life a constant burden and unfit them not only for society, but for the commonest duties of life.

Here, as in all congested conditions of the uterus and its appendages, the use of vaginal injections of very hot water, taken when the patient is in bed, with the hips elevated and on a bed-pan, should be enjoined. Such apparatus should be used as will exclude the introduction of air and insure the delivery of a constant stream.

The use of thorough hot-water douching in overcoming capillary and venous congestion, both of the uterus and of all the pelvic organs, is a matter of the first importance. The full therapeutic effect can only be obtained by insisting that the patient conform strictly to the directions for its use. The water should be used in considerable quantities—at least several quarts—with the patient in bed, and the hips elevated in such a manner as to distend the vagina in some good degree, and at a temperature as hot as can be borne without burning the patient. Thus used, it will be a most valuable adjuvant in the preparatory treatment for correcting uterine displacements. Should inflammatory conditions of the cervix or uterine body be present, they should receive due consideration and appropriate treatment.

Another complicating circumstance found in the efforts to overcome uterine displacements is that of chronic pelvic peritoneal and cellular inflammations as embarrassing, if not wholly prohibiting, any direct effort toward their reduction. It is probably no exaggeration to say that the cases of more than one third of the patients with uterine displacement, seeking relief, are more or less complicated with past or present cellulitis or peritonitis, and that a proper appreciation of their presence and consequence is not only a *sine qua non* to successful treatment, but an indispensable prerequisite to the safety of the patient.

The importance of a correct diagnosis in this connection can not be overestimated, and it generally admits of an easy solution. The patient being on her back, on placing the index finger under the cervix and lifting it upward, or on attempting to move the uterus laterally or from before backward, or *vice versa*, a pretty correct estimate is made of the degree of fixation or the limit of mobility without the use of the sound. At the same time a careful exploration of the roof and walls of the pelvis by touch, accompanied by bimanual palpation, will determine the presence of pelvic peritonitis or cellulitis. Examination by the rectum is often essential in confirming the diagnosis.

If the peritoneal structure is found thickened and resisting, or the cellular tissues are œdematous and slightly fluctuating, particularly the latter symptom, at the utero-vaginal junction, associated with tenderness—conditions with which you are all familiar—you will decide that, whatever the form or degree of displacement, no use of the sound or repositor will be admissible for overcoming the displacement.

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* In cases of anteversion, with hyperæsthesia of the uterus, the same treatment may be followed, only the cotton tampons should be placed anterior to the cervix and as high as possible.

The imminent risk and almost certain disappointment which will follow such efforts will settle at once the impropriety of their use; and it is probable that the evil consequences which occasionally follow the introduction of the sound generally occur in patients suffering from unrecognized chronic or subacute pelvic peritonitis or circum-uterine cellulitis, which might have been avoided had careful search for its presence been instituted. If any inflammation, subacute or chronic, of these structures is found to be present, it should first receive attention, and none but the gentlest measures should be adopted.

With the patient either in the Sims position or, generally better still, in the knee-chest position, let tincture of iodine be applied over the points of inflammation twice a week, and the patient kept quiet; if she is in pain, perfect rest in bed should be enjoined. This may be succeeded or alternated with small tampons of cotton saturated with pure glycerin, glycero-tannin, or glycerin and alum, having in the solution a small percentage of carbolic acid, applied at intervals of two or three days. Here, too, the use of counter-irritation is often of great value in the shape of external application of tincture of iodine, and sometimes blisters, over the hypogastrium.

Some cases of pelvic peritonitis are so prone to recur on exercise, on exposure, or at the menstrual period, that prolonged rest in bed of a few days or a few weeks in connection with treatment is needful for perfect relief, particularly if there is coincident uterine or ovarian inflammation. Under these circumstances, should evidence of acute inflammation appear, perfect rest in bed should be followed and all pain controlled by the free use of opium or morphine.

Where uterine displacement is associated with cervical laceration, with eversion and abrasion of the cervix, and with cervical and corporeal hyperplasia, it is a question in some cases which should receive attention first—the correction of the displacement, or the repair of the cervix.

It is a matter of common observation that prolapsus, due to congestion and hyperplasia attendant and depending upon laceration, recovers promptly after the union by operation of the lacerated cervix, or, if any artificial support is required, it is only for a brief period.

According to my own experience, there are cases of this kind in which temporary support, either by tampons or ring pessary, is indispensable to the preparatory treatment required in healing the abraded surfaces and relieving the congested cervical tissues, as well as preventing friction by their resting upon the floor of the pelvis before the repair of the cervix can be undertaken with reasonable prospect of success. Experience proves *beyond all question* the conservative influence of the repair of a lacerated and hypertrophied cervix, and demonstrates that under these circumstances any but radically curative measures will be fallacious; and, while temporary improvement will follow the application of alteratives to the abraded and degenerated cervix, the patient is almost certain to relapse into her former condition, greatly to the disappointment of herself and the discomfiture of those who had supposed and pronounced her cured.

It will remain for the surgeon to decide which shall first be undertaken, the cure of the laceration, or the correction of the displacement. Generally my rule has been to first repair the cervix, unless the displacement so complicated the condition that it could not be accomplished. Occasionally support will be first required. I recall a case I operated on several years ago, in which there was marked descent of the uterus accompanying extensive laceration of the cervix and considerable hypertrophy, with eversion and erosion, where a ring pessary, attached to a stem for external support, was worn for months to enable the parts to be successfully treated, so as to make the operation admissible.

Laceration of the cervix is so frequently found as a factor in uterine hyperæmia and hyperplasia that its presence and possible influence in cases of displacement should be carefully studied and rationally treated.

Among the most embarrassing and formidable of all the complicating circumstances attending uterine displacements is that of adhesions—the result of former inflammatory action. Taken as a whole, they are altogether uninviting. Some cases are amenable to treatment and yield results alike satisfactory to the patient and the attendant, but such efforts should never be undertaken in the presence of a peritoneal, cellular, or circum-uterine inflammation, nor under circumstances and conditions unfavorable to the patient, and, if entered upon, none but the gentlest measures, patiently followed and limited by a wise conservatism, should be employed.

Viewed in the light of modern surgery and the brilliant results attending abdominal section, it is safe to assert that any but the gentlest measures adopted to overcome uterine fixation from inflammatory adhesion would carry with it far greater risk to the patient than a laparotomy done for the sole purpose of severing the adhesion.

Certain forms of displacement, particularly that of anteversion and procidentia dependent upon and resulting from rupture of the perinæum, will best yield to a repair of the injury by which it was caused, and, to be effective, this should be done before atrophy of the torn muscles has taken place.

Something in the way of palliative treatment may be accomplished by tampons and pessaries and the removal of pressure from above, where restoration of the perineal body is impossible; but perfect relief may never come until Nature, by the operation of her own beneficent law, terminates the period of ovarian and uterine activity and ushers in the normal repose which succeeds the menopause, by reducing the weight of the uterus and the strain upon its ligaments.

Finally, it should be borne in mind that the reduction and correction of uterine displacements is not always to be sought for nor attained. Nature, in adapting herself to circumstances, after a time becomes tolerant of that which was once a source of great annoyance and discomfort.

The gentle lifting of a retroflexed uterus, but slightly movable from old inflammatory adhesions, and its support by a tampon of elastic cotton in Douglas's *cul-de-sac*, may afford its unfortunate possessor, who at best is not infrequently a chronic invalid and almost incapable of locomotion, a few hours of ease, thereby enabling her to ride in an easy carriage or spend an evening in the drawing-room.

Thus it is that the nutrition of the parts may become so changed, and the relation different structures bear to each other so modified, that the partial correction of a flexion or version, or the slight elevation and temporary elastic support of a retroverted fundus bound by adhesion, or held in an abnormal position by inflammatory deposits, will afford greater relief and better meet the indications than efforts looking toward complete restoration.

After all that patience and skill can accomplish for the correction of uterine displacements by mechanical appliances and local treatment, the physician should never forget that the wise adaptation of correct general therapeutic measures, in the way of hygiene and systemic remedies, may be, and often is, the determining influence which commands success by enabling Nature to assert her own most beneficent power.

When mechanical supports, properly and persistently applied, have exerted the full measure of their corrective power and the desired end has not been attained, change of surroundings, a sojourn in the mountains, or a journey by sea, may serve as a valuable adjuvant in hastening recovery. Knowledge and skill are important requisites in the local management of these conditions, but, to assure their possessor of the highest degree of success, he must be able to bring to their aid the intelligent application of well-established general principles of practice and the wise selection of appropriate therapeutic measures, medicinal and hygienic.

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Book Notices.

BOOKS AND PAMPHLETS RECEIVED.

Second Annual Report of the Bureau of Animal Industry, for the Year 1885 (U. S. Department of Agriculture). Washington: Government Printing-Office, 1886. Pp. 5 to 662.

La limonea cloroidrica nell' ultima pandemia di colera. Esame delle statistische del dottor Romeo a Marsiglia, e del dottor Virgilio a Pizzone a Volturno, pel dottore Cav. Ottavio de Stefano. Con una appendice de altre statistische ed un esame critico. Di quelle publicate dal Prof. Cantaini. Napoli, 1885. Pp. 4 to 136.

A Treatise on the Diseases of the Nervous System. By William A. Hammond, M. D., Surgeon-General U. S. Army (retired list); Professor of Diseases of the Mind and Nervous System in the New York Post-graduate Medical School and Hospital, etc. With one hundred and twelve Illustrations. Eighth Edition, with Corrections and Additions. New York: D. Appleton & Co., 1886. Pp. 945. [Price, $5.00.]

L'année médicale (huitième année), 1885. Résumé des progrès réalisés dans les sciences médicales. Publié sous direction du Dr. Bourneville, Médecin de l'hospice de Bicêtre, etc. Paris: Librairie Plon, 1886. Pp. viii–421.

Studies in Pathological Anatomy. By Francis Delafield, M. D., Professor of Pathology and Practical Medicine, College of Physicians and Surgeons. Volume II. Part 2. Chronic Phthisis. Lobar Pneumonia. Plates xiii–xxxix. New York: William Wood & Co., 1886. [Price, $3.00.]

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Diseases of the Stomach and Intestines: A Manual of Clinical Therapeutics for the Student and Practitioner. By Prof. Dujardin-Beaumetz, Physician to the Cochin Hospital, etc., Paris. Translated from the Fourth French Edition, by E. P. Hurd, M. D., etc., Newburyport, Mass. With Illustrations and one Chromo-Lithograph. New York: William Wood & Co., 1886. Pp. xvi–1 to 389. [Wood's Library of Standard Medical Authors.]

Les bactéries et leur rôle dans l'anatomie et l'histologie pathologiques des maladies infectieuses. Par A.-V. Cornil, Professeur d'anatomie pathologique à la Faculté de médecine de Paris, et V. Babes, Professeur extraordinaire d'histologie pathologique à l'université de Budapest. Deuxième édition revue et augmentée, contentant les méthodes spéciales de la bactériologie. 348 figures en noir et en couleurs dans le texte, et 4 planches hors texte. Paris: Félix Alcan, 1886. Pp. 839. [Prix, 30 francs.]

Ichthyol und Resorcin als Repräsentanten der Gruppe reduzierender Heilmittel. Von Dr. P. G. Unna. [Dermatologische Studien, Zweites Heft.] Hamburg und Leipzig: Leopold Voss, 1886. Pp. 85. [Preis, Mark 1.60.]

The Medical Annual; A Record and Review of the Year's Progress in Medicine, Surgery, and General Science. Pp. 236. And the Practitioner's Index, A Work of Reference for Medical Practitioners. 1886. London: Henry Kimpton. Pp. 266.

The Genuine Works of Hippocrates. Translated from the Greek, with a preliminary Discourse and Annotations. By Francis Adams, LL. D., Surgeon. In Two Volumes. Vol. I. New York: William Wood & Co., 1886. Pp. v–3 to 390. [Wood's Library of Standard Medical Authors.]

Insanity and its Treatment: Lectures on the Treatment, Medical and Legal, of Insane Patients. By G. Fielding Blandford, M. D., Oxon., etc. Third Edition, together with Types of Insanity. An Illustrated Guide in the Physical Diagnosis of Mental Disease. By Allan McLane Hamilton, M. D., etc. New York: William Wood & Co., 1886. Pp. ix–379. [Wood's Library of Standard Medical Authors.]

Diseases of the Spinal Cord. By Byrom Bramwell, M. D., F. R. C. P. (Edin.), Lecturer on the Principles and Practice of Medicine, and on Medical Diagnosis, in the Extra-academical School of Medicine, Edinburgh, etc. Fifty-three Colored Plates and One Hundred and Two fine Wood Engravings. Second Edition. New York: William Wood & Co., 1886. Pp. xiv–298. [Wood's Library of Standard Medical Authors.]

Hand-book of Practical Medicine. By Hermann Eichhorst, Professor of Special Pathology and Therapeutics, and Director of the University Medical Clinic, in Zurich. Vol. I. Diseases of the Circulatory and Respiratory Apparatus. One Hundred and Three Wood Engravings. New York: William Wood & Co., 1886. Pp. v–407. [Wood's Library of Standard Medical Authors.]

Transactions of the Obstetrical Society of London, Vol.

XXVII, for the Year 1885. With a List of Officers, Fellows, etc. London: Longmans, Green, & Co., 1886. Pp. lix–355.

Trabajos Oftalmológicos del Asilo Santa Lucía. Resumen Estadístico de los 1,616 Enfermos Asistidos y 198 Operados durante el año 1885, seguido de un Apendice Estadístico de 1,285 Cataratas y de 795 Ojos Faltos de Vision entre 7,568 Enfermos reconocidos. Por D. Santiago de los Albitos, Director proprietario del Asilo Santa Lucía, etc. Madrid, 1886. Pp. 48.

Memoir of Austin Flint, M. D., LL. D. By A. Jacobi, M. D., President of the New York Academy of Medicine. [Reprinted from the "Medical Record."]

On the Presence of the Tubercle Bacillus in Old Specimens of Diseased Lung. By Vincent D. Harris, M. D., F. R. C. P. (London). [Reprinted from "St. Bartholomew's Hospital Reports."]

The Sixty-second Annual Report of the Officers of the Retreat for the Insane, at Hartford, Conn., April, 1886.

Malaria and its Toxic Influences. Malarial Hæmaturia. By W. O'Daniel, A. M., M. D., Bullards, Ga. [Reprinted from the "Transactions of the Medical Association of Georgia."]

De quelques innovations et améliorations balnéaires à introduire à Cauterets. Par le docteur Dutrouscau. [Extrait de la "Revue médicale et scientifique d'hydrologie et de climatologie pyrénéennes."]

Excerpta from the Biennial Report of the Board of Health of the State of Louisiana to the General Assembly, 1884–1885.

The Moral and Industrial Management of the Insane. By H. E. Allison, M. D., Willard, N. Y. [Reprinted from the "Alienist and Neurologist."]

Papillom am 5. Luftröhrenknorpel auf laryngoscopischem Wege entfernt. Von Dr. C. Labus aus Mailand. [Separat-Abdruck aus der Monatsschrift für Ohrenheilkunde, etc.]

Report of the Board of Managers of the Pennsylvania Hospital to the Contributors, at their Annual Meeting, held Fifth Month, 3d, 1886, comprising the Reports of the Department for the Sick and Wounded and of the Departments for the Insane. together with the Accounts of the Treasurer and Steward.

Cornell University. Proceedings in Memory of Louis Agassiz and in Honor of Hiram Sibley. Commencement Week, 1885.

Apuntes para el Estudio de los Queratomas. Por los Doctores D. Alfredo R. Viforcos y D. Leopoldo Lopez Garcia. Con Once Grabados intercalados en el Texto. Madrid: Escuela Tipográfica del Hospicio, 1886. Pp. 5 to 84.

Official Report of the Memorial Meeting of the New York County Medical Association in Honor of the late Austin Flint, M. D., LL. D., held at the Carnegie Laboratory, Bellevue Hospital Medical College, New York, April 19, 1886. [Reprinted from "Gaillard's Medical Journal."]

Correspondence.

LETTER FROM WASHINGTON.

The Surgeon-Generalship of the Army.—The Bill legalizing Dissections in the District of Columbia.—The International Medical Congress.—The Medical Department of Georgetown University.—The Yellow-Fever Commission Bill.—The National Board of Health.—The New Medical Library and Museum.

Washington, *June 27, 1886.*

Medical interest is now centering on the question of the succession to the Surgeon-General of the army, General Robert Murray, who will, under the operation of the law, be retired in August next, on reaching the age of sixty-four. Surgeon-General Murray has been an able and conservative officer, and he will have made a lasting mark in the history of the medical department of the army. Coming into the medical department as an assistant surgeon in 1846, he had attained his surgeoncy in 1860, and when the war of the rebellion broke out he was in the prime of his always active life. At the close of the war he was breveted lieutenant-colonel and colonel for "faithful and meritorious service during the war," and was subsequently promoted to lieutenant-colonel, colonel, and brigadier-general, succeeding the late Surgeon-General Crane. General Murray has well earned his retirement. The officers spoken of as likely to succeed him are Colonels Baxter, Sutherland, and Perin, and Lieutenant-Colonel Page, either of whom would do credit to the corps. It is generally thought here, however, that the choice will fall on Colonel Baxter, who is now the senior colonel in commission.

The President has vetoed the bill legalizing dissections in the District of Columbia, on the ground that the bill did not provide sufficient safeguards against the delivery of bodies to unauthorized persons. It is understood that the measure will be amended and reintroduced.

The local Committee of Arrangements of the Ninth International Medical Congress have now completed their organization, with Dr. A. Y. P. Garnett as chairman, Dr. J. M. Toner vice-chairman, and Dr. Kleinschmidt as secretary. The full list of the committee is now printed for general information. The President, the Secretary of State, the President of the Senate, and the Speaker of the House of Representatives have authorized the use of their names as patrons of the congress.

The Medical Department of Georgetown University has purchased a lot on H Street, between Ninth and Tenth Streets, for the erection of the new medical college building. It is expected that the building will be ready for the reception of the class in October next. Dr. Joseph Taber Johnson, the President of the Medical Faculty, sailed for Europe last week. He will attend the British Medical Association as a delegate from the American Medical Association.

The Senate has passed the yellow-fever commission bill, which was urged in person by Dr. Joseph Holt, of New Orleans, in behalf of the American Public Health Association. Some opposition on the part of some of the friends of the late National Board of Health, and some sentiments of frugality, induced Congress to amend the bill so that it now provides for the detail of two officers already in the service, but with the proviso that they must be skilled in bacteriology and microscopical research. No provision is made in the bill for the appointment of a member of the commission from civil life, but the employment of experts is allowed.

The sundry civil bill, as reported to the House, makes no provision for the continuance of the salaries of the National Board of Health. The board has had no general meeting for more than two years, and, since the lapse of its quarantine powers in 1883, has had little if any duty to perform. The bulk of the report for 1885, just issued, consists in a reprint of the consular reports from Europe, previously printed by the State Department, and a reprint of State health laws.

Owing to the labor strike, the work on the new Medical Library and Museum has been suspended for some weeks—a fact greatly lamented by all frequenters of the present insecure building.

Infectious Pleuro-pneumonia in Pennsylvania.—A few cases of the disease are reported to have been discovered among cattle on a farm in the town of Manor. All of the affected animals have been killed by order of the State Veterinary Surgeon.

THE
NEW YORK MEDICAL JOURNAL,
A Weekly Review of Medicine.
Published by D. Appleton & Co.
Edited by Frank P. Foster, M. D.

NEW YORK, SATURDAY, JULY 3, 1886.

MILITARY DRILL FOR SCHOOL-BOYS.

It is pleasing to observe such signs of the interest that is coming to be manifested by the medical profession in the matter of the physical education of youth as are shown in the discussion that took place at a recent meeting of the Section in Clinical Medicine, Pathology, and Hygiene of the Suffolk District Medical Society, of Boston, a summary of which was published in our issue for June 19th, and the publication by the Government Bureau of Education of Dr. Edward Mussey Hartwell's admirable *brochure* entitled "Physical Training in American Colleges and Universities."

Although the effect of military drill on boys, which was the subject of discussion at the Boston meeting, was pictured by so eminent an authority as Dr. Dudley A. Sargent, of Harvard, as not only not beneficial, but in the case of all but vigorous boys positively injurious, we have to confess that we incline to favor the contrary position, which seems to have been upheld only by General Moore, the instructor in military drill in the Boston schools. In particular, our observation is quite in accord with General Moore's statement that, so far as injury was concerned, more boys had to be excused from drill on account of injury from gymnastic exercises than from injury in drill. Much depends, however, on whether the statement was meant to refer to such enduring injury as to render the boys in question permanently unfit for drill, or only to the occasional mishaps that would call for a temporary withdrawal from the exercise; and also on whether the injuries alluded to were the results of a well-devised system of gymnastics—one, for instance, that Dr. Sargent would approve of—or of mere gymnastic "skylarking" by boys left to their own devices. Unless General Moore's statement referred to long-continued disability as the consequence of systematic gymnastics, it hardly amounts to a *tu quoque.* Still, as we said before, we incline to the General's side of the argument.

Military drill can not, of course, take the place of well-ordered gymnastics, and that seems to be the legitimate inference from Dr. Sargent's remarks. The two should go hand in hand, the endeavor being to so manage each as to secure the most good and the least harm it can do. Badly as gymnastics is taught and practiced for the most part, we are quite ready to concede that it is nearer what it ought to be than the military drill is; but this seems to be because the instructors in gymnastics have constantly in mind the legitimate object of the exercises, whereas it seems seldom to enter the head of a drill-master that he ought to seek to accomplish much else than what is likely to conduce to creditable precision on parade. In other words, gymnastics, in competent hands, is not apt to be perverted to other objects than the direct benefit of those subjected to it, while military drill has only the incidental and subordinate purpose of improving the physique. That the manual of arms is capable, however, of being made highly conducive to the development of vigor, symmetry, and a normally adjusted action of the various parts of the body, admits of no question. While we should be glad to see a comprehensive and well-ordered system of gymnastics carried out in all our schools, we must recognize that such a state of things, although reasonably sure to come in the course of time, is not likely to come soon; it will be well, therefore, not to reject the military drill in the mean time, but rather to seek so to modify it as to make it a still better substitute than it is at present for a complete gymnastic course.

On another occasion we hope to speak more at length of Dr. Hartwell's exceedingly valuable essay.

A PARADISE FOR DOCTORS.

Dr. Morell Mackenzie, the well-known London laryngologist, discusses the question "Is Medicine a Progressive Science?" in a recent number of the "Fortnightly Review." The article is lively and engaging, and it is pleasant to see how hopeful the author is as to the destined achievements of medicine, although he takes pains to disavow any share in Professor Huxley's expectation that sooner or later a remedy for nearly all forms of disease will be found in drugs. Indeed, it is not so much medicine in its narrow sense of which he is hopeful as it is surgery and hygiene, the former of which has already reclaimed and put under cultivation much of the waste land of medicine, while the latter is advancing in the performance of a task the final accomplishment of which must lead to the annihilation of its parent, medicine, which, having no more worlds to conquer, will have to sheath its sword. But this millennial state of things is not yet close upon us; pending its dawn, the one thing needed to hasten the advance of medicine itself is the separation of scientific research from the fetters of the fight for bread.

For the incompatibility between research and practice Dr. Mackenze can see no remedy, unless a way can be found of freeing the physician from his dependence on patients without lessening the salutary stimulus to exertion. The problem might be solved, he suggests, if the State were to undertake the medical guardianship of its subjects, doctors being Government officials paid out of the public treasury on a scale strictly commensurate with their activity and success. The sick, he thinks, would be just as well cared for as at present, and their attendants would have a position of greater freedom and at the same time of greater dignity. It might be enacted, he goes on to say, that a careful and complete autopsy of all dead bodies, without distinction, should be made by thoroughly qualified officers expressly appointed for the purpose, and full records of such examinations kept, to be issued to members of the profession at short intervals. This, together with experimentation on condemned criminals, would, he has little doubt, "make medicine advance more in a few years than it has done since the days when it was the custom for those who had recovered from any illness to hang a record of the means of cure in the temple of Æsculapius, for the benefit of fellow-sufferers."

In all this we can not take the distinguished author *au sérieux*, but must suppose that he has given free rein to his fancy, either for his own diversion or to amuse his readers; for such a Utopian state of things as he pictures would not accomplish the object in view, to say nothing of the fact that it would involve the utter subversion of the rights of the individual subject. *C'est beau, mais ce n'est pas la guerre!*

MINOR PARAGRAPHS.

THE LONDON HOSPITAL SUNDAY FUND.

The "Lancet," the editor of which has taken a prominent and most creditable part in furthering the good work of securing voluntary contributions to the resources of the London hospitals, publishes in its issue for July 19th its first special supplement in support of the enterprise, devoting to it no fewer than twelve pages. It is difficult to estimate the effect that this may have on the artisan class, to which it is essentially addressed, but there is no difficulty in discerning the "Lancet's" hearty devotion to the cause or its readiness to use its resources to promote it. Its appeal is simply incontrovertible, and the arguments employed have quite as much force in New York as in London, for in both cities the hospitals are on much the same financial basis, and, if anything, their aid is even more freely dispensed here than in most other places.

NURSES AND THE HYPODERMIC SYRINGE.

Under the heading of "High Nursing and Hypodermic Injections," the "Lancet" protests, and in our opinion very properly, against the practice of intrusting hypodermic medication to nurses, however well trained they may be. There is reason to fear that this ready method of drugging is practiced altogether too much, and its relegation to nurses, even under instructions, is undoubtedly calculated to encourage laymen in resorting to it themselves. The hypodermic syringe figures too often in the armamentarium of the morphine *habitué*, and it seems to be the duty of the profession to refrain from any measure, however indirect, that may tend still further to popularize it.

NEWS ITEMS, ETC.

Infectious Diseases in New York.—We are indebted to the Sanitary Bureau of the Fourth Division of the Health Department for the following statement of cases and deaths reported during the two weeks ending June 29, 1886:

DISEASES.	Week ending June 22.		Week ending June 29.	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever	8	2	9	1
Scarlet fever	38	4	30	7
Cerebro-spinal meningitis	5	5	7	7
Measles	65	4	35	9
Diphtheria	65	20	74	32
Small-pox	1	1	3	0

The National Board of Health.—Dispatches from Washington state that an amendment to the Sundry Civil bill has been reported by the Committee on Epidemic Diseases, proposing an appropriation of $33,500 to pay the expenses of the board.

The Health of the State of New York.—According to the State Board of Health's "Monthly Bulletin" for May, in every thousand deaths there were 6·75 from typhoid fever, 18·46 from diarrhœal diseases, and 59·15 from croup and diphtheria. The latter disease is reported as having been epidemic in New Rochelle, Bethlehem, and North Hempstead.

A New Lunatic Asylum is to be established in the northern part of the State of New York. Among the commissioners appointed to choose its situation are Dr. P. M. Wise, of the Willard Asylum, and Dr. J. M. Cleveland, of the Hudson River State Hospital at Poughkeepsie.

Personal Items.—Dr. Louis A. Duhring, of Philadelphia, and Dr. Joseph W. Howe, of New York, sailed for Europe on Saturday, the 26th ult. Dr. Fordyce Barker, of New York, Dr. John S. Billings, of the army, Dr. James R. Chadwick, of Boston, and Dr. H. P. C. Wilson, of Baltimore, are to sail on Thursday of next week.

Harvard University.—At the recent annual commencement special mention was made of work done by two gentlemen of the medical school—Edward K. Dunham, Ph. B., who had written on a "Mammary Tumor of Interstitial Type containing Giant Cells," and Horace M. Locke, whose essay was on "A Case of Myxœdema." The degrees in medicine were conferred as follows: Doctor of medicine, 59; doctor of medicine after four years' course, 5; doctor of medicine and master of arts, 1; doctor of medicine with praise, 1; doctor of dentistry, 10; and doctor of veterinary medicine, 5. Dr. Francis M. Weld, of New York, was elected one of the directors of the Alumni Association.

The Yale Medical School.—It is announced that Dr. James Campbell, of Hartford, has been appointed professor of obstetrics.

The University of Virginia.—Dr. W. B. Towles has been elected professor of anatomy.

An Abortionist, of whom it is said that he was "once a physician of large practice and good repute," was sentenced in Toronto, on Tuesday last, to five years in the penitentiary, for malpractice on the person of a girl of sixteen. It is said that he fled to Toronto from Buffalo, where he was prosecuted for a similar offense several years ago.

Army Intelligence.—*Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from June 20, 1886, to June 26, 1886:*

De Witt, Calvin, Major and Surgeon. Ordered for duty in the Department of Dakota. S. O. 142, A. G. O., June 21, 1886.

Perin, Glover, Colonel and Assistant Surgeon-General. Granted leave of absence for one month, with permission to apply for one month's extension. S. O. 54, Department of Dakota, June 14, 1886.

Brooke, John, Major and Surgeon. Ordered for duty as post surgeon at Fort McHenry, Baltimore, Md. S. O. 67, Division of the Atlantic, June 23, 1886.

Gardiner, John de B. W., Captain and Assistant Surgeon. Ordered for duty as post surgeon at Newport Barracks, Newport, Ky. S. O. 67, Division of the Atlantic, June 23, 1886.

Gibson, Robert J., Captain and Assistant Surgeon. Granted leave of absence for thirty-five days. S. O. 43, Division of the Pacific, June 14, 1886.

Naval Intelligence.—*Official List of Changes in the Medical Corps of the United States Navy for the week ending June 26, 1886.*

Beardsley, Grove S., Medical Inspector. Detached from the Navy-Yard, Norfolk, and ordered to the Brooklyn.

Bright, G. A., Surgeon. Detached from the Brooklyn and ordered to the Navy-Yard, Norfolk.

Society Meetings for the Coming Week:

Monday, *July 5th:* New York Academy of Sciences (Section in Biology); Morrisania Medical Society (private); Brooklyn Anatomical and Surgical Society (private); Utica, N. Y., Medical Library Association; St. Albans, Vt., Medical Association; Providence, R. I., Medical Association; Hartford, Conn., City Medical Association; Chicago Medical Society.

Tuesday, *July 6th:* Elmira, N. Y., Academy of Medicine; Buffalo Medical and Surgical Association; Ogdensburg Medical Association; Medical Society of the County of Broome (quarterly); Hudson (Jersey City) and Union (quarterly), N. J., County Medical Societies; Chittenden, Vt., County Medical Society; Androscoggin, Me., County Medical Association.

Wednesday, *July 7th:* Medical Society of the County of Richmond, N. Y. (annual—Stapleton).

Thursday, *July 8th:* Medical Society of the County of Fulton, N. Y. (semi-annual—Johnstown); South Boston, Mass., Medical Club (private).

Friday, *July 9th:* Medical Society of the Town of Saugerties, N. Y.

Saturday, *July 10th:* Worcester, Mass., North District Medical Society.

Letters to the Editor.

MAGENDIE'S SOLUTION IN POST-PARTUM HÆMORRHAGE.

Oakland, Cal., *June 22, 1886.*

To the Editor of the New York Medical Journal:

Sir: I find in the journal for June 12th a letter from Dr. Thomas G. Duncan, on post-partum hæmorrhage, which reminds me of the fact that I have had little trouble with those usually troublesome and often dangerous cases since adopting the following plan of treatment, and which I have invariably followed for more than fifteen years: On finding the surface of the patient pale, the extremities cold, with profuse hæmorrhage, I at once inject hypodermically from ten to fifteen minims of Magendie's solution of sulphate of morphine. This will invariably, and within a few minutes, produce a flushed surface, warm extremities, and a stopped or much-diminished flow. I adopt no other means—no styptics, no cold compresses, and no foolish "plugging." Truly yours,

M. S. McMahan, M. D.

Proceedings of Societies.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Meeting of May 24, 1886.

The President, Dr. Daniel Lewis, in the Chair.

Disease of the Ear in Childhood.—Dr. E. Benjamin Ramsdell read a paper with the object of calling the attention of general practitioners to a neglected but important class of cases which early and simple treatment would often entirely relieve. A brief review of the anatomical relations of the ear showed the importance of disease of that organ. Of 383 cases occurring in children under fourteen years of age which had come under his observation at the Manhattan Eye and Ear Hospital, 346 had been affections of the middle ear, or over ninety per cent., while the auricle and external ear had been affected in only nine per cent., and the internal ear and auditory nerve in only one per cent. In a general way, the cases could be divided into suppurative and non-suppurative. The diagnosis of suppuration of the middle ear could almost be made from the presence of a purulent discharge alone, for, out of 227 cases of discharge from the ear, in only three had the source of the suppuration been in the external auditory canal. In such cases the physician would find, on cleaning out the ear, a perforation of the tympanum, and within the cavity would be revealed a suppurative periostitis. A catarrhal process had crept up the Eustachian tube from the naso-pharynx and resulted in suppuration. The treatment should be cleansing and antiphlogistic. The author had resorted to such measures as the following: The hot-water douche applied by means of a fountain syringe; in some cases he had used a few drops of a ten-per-cent. solution of peroxide of hydrogen, followed by the application of soft absorbent cotton on a probe; in some cases it had been necessary to make astringent applications, as of nitrate-of-silver solution or of tannic acid; and he had usually made use of powdered borax or iodoform. Only a sufficient amount of iodoform had been dusted over the inflamed surface to make a thin film. He had also employed Politzer's method. In addition to treatment of the ear affection, attention had been given to the naso-pharynx. This treatment, when properly carried out, had resulted in restoration of hearing and healing of the drumhead. A number of cases treated in private practice were related, of which the following was an example: A child, three weeks before it was seen by Dr. Ramsdell, had had pain in the left ear, which was followed by a discharge. The watch was heard five inches from the right ear, and by the left ear only when pressed on the auricle. There were found to be acute suppurative inflammation of the middle ear on the left side and catarrhal inflammation of the middle ear on the right side, with naso-pharyngeal catarrh. The nose was cleansed with a spray of warm water, and tannin and glycerin were applied to the mucous membrane by means of the cotton-holder. Inflation of the middle ear was practiced by Politzer's method, and the warm-water douche was used twice daily. At the end of eight days the discharge had ceased, the drumhead had healed, and the hearing distance in the left ear had advanced to six inches, and in the right to thirty inches. In the next case there was perforation of the drumhead in both ears; the watch was heard at a distance of half an inch on the right side, and of six inches on the left side. A discharge had taken place from the right ear two days previously, and from the left ear that morning. The treatment consisted in gentle inflation, the hot-water douche twice a day, and iodoform blown into each ear. Within three days the discharge ceased, there was no more pain, and the watch could be heard at a distance of twenty-four inches on each side. Three days later both drumheads were healed.

Cleanliness, not drugs, was the *sine qua non* of the treatment of suppurative inflammations of the middle ear. The thick discharge in many cases would resist syringing, and would require careful cleansing with the cotton-holder. The author thought that continued syringing of the ear resulted in some cases in prolonging the inflammation, as some of the water was retained and acted as a poultice. Inflation aided in cleansing the ear. After cleansing, the cavity should be dried, and a non-irritating healing powder be applied in a finely divided state so as to lie upon the surface in a thin film. If there were polypi, they should be removed with the sharp curette, and granulations should be treated with astringents. The author also related some cases of catarrh of the middle ear, which he spoke of as being either acute, subacute, or chronic.

Dr. D. B. St. John Roosa opened the discussion with an earnest appeal for the more general recognition of ear diseases in children in the early stage. Treatment by such simple methods as had been employed by the author of the paper would tend greatly to diminish the statistics of deaf-mutism, of bad hearing, and of facial paralysis which sometimes resulted in neglected cases. It was true that a large percentage of cases of disease of the ear in childhood ended in recovery in spite of the fact that they either got no treatment at all or only that which was unintelligently employed. But there was a fearful contingent which did badly. There could be no difference of opinion as to the general principle of treatment by cleanliness and astringents, with attention to the naso-pharynx. There was no organ in the body more susceptible of immediate relief in the majority of instances than the ear. The treatment in the main was local. Although every practitioner would have occasionally to regulate the skin, the bowels, the diet, etc., Dr. Roosa did not believe that any "constitutional" treatment was of much value in these acute aural cases in children.

Dr. Oren D. Pomeroy spoke a word in behalf of the general practitioner, who had been blamed for not early recognizing and properly treating cases of acute disease of the ear in children. The ravages resulting from otitis in childhood were not always susceptible of being arrested. In scarlet fever they often went on to the destruction of the hearing apparatus in a very short time. It was very difficult to see the drumhead in a child, especially when the ear was in a state of acute inflammation. Little children were not capable of making their sufferings clearly known, and the physician might easily overlook the symptoms in the ear, as he had done even in his own family, until a discharge took place which could leave no doubt as to the cause of the pain. If it became necessary to open the mastoid it could be done in children without the drill; a sharp knife was the only instrument required. There might be a considerable sequestrum of bone in disease of the ear in children without destruction of life. He had recently had a case in which the larger part of the temporal bone sloughed off and the meninges were left bare, yet the patient recovered. Of course there was facial paralysis. In proportion to the severity of the disease, the danger to life was much less in children than in adults. It was a good rule, when a child was suffering without any apparent cause, to examine the ear.

Dr. Simon Baruch thought the arraignment of the general practitioner was deserved, judging from the small attendance at the meeting. If such a subject as disease of the appendages of the womb had been announced, it would no doubt have been different. He thought one reason why cases of disease of the ear in childhood were not recognized by the general practitioner at an early date was the fact that a common cause was scarlet fever, but the aural trouble did not become manifest usually until the period of desquamation, when the physician had relaxed his efforts or had ceased his visits altogether. Dr. Baruch now made it a custom to gently pull the ears, and by other means try to detect any symptoms of disease during the course of scarlet fever before perforation of the drumhead had taken place.

Dr. Joseph A. Andrews thought that Dr. Roosa's remarks did not apply alone to America, but to the whole world. This was evident from the remarks of those able to judge abroad. Dr. Andrews called attention to the fact that the suture between the petrous and squamous portions of the temporal bone closed later than that between the mastoid and squamous portions, and might be one of the dangers to the young patient from spread of disease from the tympanic cavity to the meninges and brain. Only the day before, a physician had asked him to see a patient in consultation to whom the parents had called him only a little while before. A few hours later the patient was dead. This was only one of those cases in which the physician was called too late to be of any assistance. So many children died of meningeal disease without ever having had their ears examined that it was impossible to say how often middle-ear disease spread to the meninges. As to trephining the mastoid in these little patients, there was no evidence of mastoid cells until the end of the first year after birth. The mode and propriety of operating were matters of dispute, and he would not now discuss them. He regarded iodoform as injurious in acute inflammation of the middle ear, for it was not dissolved, and was very irritating. Boric acid was capable of accomplishing more good than any other medicinal application, both in acute and in chronic inflammation of the middle ear. Tannic acid was objectionable also.

Dr. Garrish said many patients with chronic suppurative otitis were scrofulous, and required constitutional treatment. He also applied leeches and hot poultices, employed the douche, and further allayed pain by tincture of opium and almond- or sweet-oil.

Dr. Laurence Johnson was convinced that such lessons as had been inculcated in the paper would prove of benefit to the general practitioner, and, if obeyed, would diminish the number of cases of ear disease followed by deaf-mutism and other evil consequences. In an institution in which there were only subacute or chronic cases of suppurative ear disease, he had instructed the nurses to douche the ears of the children. The nurses who had charge of the girls had carried out his instructions, while those who had charge of the boys had failed to do so. At the end of some days all the girls manifested improvement, while no change had taken place in the condition of the boys. The douche was capable of doing harm if used too frequently; he would not repeat it until after the boric acid employed had become wet with the discharge. In acute cases he further controlled pain by the use of morphine and glycerin, two or three drops of solution of morphine to a drachm of glycerin.

Dr. Leszynsky spoke of a case in which there were symptoms of meningitis and no evidence of disease of the ear until after a discharge took place, when the other symptoms ceased. The child was old enough to describe her sufferings intelligently. In another case local treatment was of no benefit until after constitutional treatment had been adopted.

The subject was further discussed by several speakers.

NEW YORK SURGICAL SOCIETY.

Meeting of May 24, 1886.

Dr. L. A. Stimson in the Chair.

Resection of the Elbow Joint for Ankylosis.—Dr. H. B. Sands presented a patient fifteen years of age who was first seen by him last autumn, in consultation, in Dartmouth, N. S. The ankylosis at that time maintained the arm and forearm in almost a right line; the ankylosis, he thought, was almost complete, and had existed since the boy was about two years of age. The usual operation was performed, but, when the patient was again seen by Dr. Sands about a month ago, very much the same condition existed as before, and there was little if any motion, the arm being almost useless. He repeated the operation of resection of the joint nineteen days ago, when he removed about two inches of bone and placed the forearm at a right angle. Primary union of the divided soft parts occurred in thirteen days; the dressings were then removed, exposing the line of the incision. Only one incision was made, situated in the median line; the adhesions were then forcibly broken up, and the ends of the bones turned out of the wound and sawn off to an extent of two inches.

Dr. T. M. Markoe asked if the periosteum was saved.

Dr. Sands replied that it was not, and that he thought the sub-periosteal operation in these cases was often prejudicial instead of being of advantage, as one could never tell how much bone was going to be reproduced, and the reproduction often caused stiffness of the joint or limitation of motion—the very thing to be avoided.

Dr. A. G. Gerster asked if any signs of previous tubercular disease were discovered.

Dr. Sands replied that there were none.

Dr. Gerster would venture to say the explanation of the prompt healing of the wound was because there was no tuberculosis present.

Dr. Markoe asked if there were any evidences of disease of the bone.

Dr. Sands replied that there were not.

The Chairman asked if the wound was absolutely dry in thirteen days.

Dr. Sands replied that it was, and that during the operation the one-to-a-thousand bichloride solution was used, and the dressings were saturated in the same and partially dried.

The Chairman asked if he had given up iodoform.

Dr. Sands replied that he had almost done so.

Dr. Gerster remarked that he had noticed these secondary operations, as a rule, did well, and he thought the explanation might be that in the primary operation intermuscular planes of connective tissue were opened into almost as a rule; that the wounds, therefore, were of a rather irregular and sinuous character, drainage was difficult, and spreading of inflammation was easy; and that these circumstances formed favorable opportunities for suppuration; whereas, when a secondary operation was performed, the work was in uniformly dense, firm tissues, which gave a comparatively smooth capsular wound, the drainage of which was perfect and tended to rapid recovery.

Dr. Sands had no doubt that might be one explanation of the successful results, but he had noticed that, when operations had been performed upon cicatricial parts, union by the first intention was less apt to occur when the parts were in a normal condition.

Dr. Gerster asked if the Esmarch bandage was used in this case.

Dr. Sands replied that it was.

Clinical Aphorisms on Fibro-myomatous Tumors of the Uterus.—The following paper was read by Dr. F. Lange: Among a limited number of fibro-myomatous tumors of the uterus which have altogether come under my observation, I have had the opportunity in three instances to see a rather uncommon termination of the disease—namely, in two cases by expulsion of tumor masses after spontaneous sloughing; in the third case by shrinkage of the tumor after central suppuration and softening. In all of these cases more or less surgical help became necessary to aid the natural process, but all of them, in spite of a protracted serious illness, at last ended with recovery, and illustrate in a very eloquent manner the ability of nature to find —in spite of heavy obstacles—its way toward ultimate recovery.

The following short histories may sufficiently point out the essential features of the above cases:

Case I.—On the 12th of October, 1883, I saw, in consultation with Dr. Schaie, of this city, Mrs. B., forty-five years of age, who was suffering from a large abdominal tumor which had existed for about three years, and by a number of physicians, both here and abroad, had been diagnosticated as a fibro-myoma of the uterus. To Dr. Schaie I owe most of the following notes about the history: Mrs. F. had been advised everywhere not to have an operation done, on account of the great risk attached to it. Within the last year she had been treated repeatedly, for long periods of time, with ergot, administered hypodermically as well as internally, but without any noteworthy success in reference to hæmorrhage or the size of the tumor. The latter, when I saw the patient, filled, as a resistant, somewhat irregular-shaped mass, almost the entire abdomen. Having at that time already operated successfully upon several patients with exceptionally large, solid uterine tumors, I proposed, in view of the intense suffering of the patient, the radical operation. The patient declined. In the beginning of November her condition became feverish, there appeared an offensive discharge from the vagina, and she lost rapidly in flesh. On the 18th of November Dr. Schaie was able to remove a piece of the tumor of about the size of the fist, in a decomposed necrotic condition, from the vagina, which for the next two weeks was almost daily followed by others of smaller or larger size. A particularly large piece was extracted from the uterus at the end of November. I then saw the patient again in consultation; to my surprise the enormous tumor had so much disappeared that the uterus now was not larger than at about the fourth or fifth month of pregnancy. There existed still a very offensive discharge, which, however, ceased very promptly after I had extracted from the uterine cavity the remainder of an entirely separated mass of tumor. The offensive smell of this sloughed tissue was beyond description. The uterine cavity was disinfected as thoroughly as possible, and disinfecting irrigations were kept up for some time after. The patient, though very much run down, made a rather rapid recovery, and was able, four months later, to see Dr. Schaie at his office. The latter has had the kindness to inform me that she is now in perfect health. About a year ago her menses—which had become quite normal—ceased. There is no recurrence of the tumor, and the parts seem to be in an almost normal condition. As far as I remember, the mass of the tumor at the first visit must have weighed at least from fifteen to twenty pounds.

Case II.—Mrs. H., forty-six years of age, who had never been pregnant, consulted me in October last. Though otherwise in good health, she had suffered for the last two years from profuse and prolonged menstruation, now and then associated with severe pain in her back and vomiting. Within the last month, a few days before and after menstruation, a white discharge had appeared. There was no doubt that her trouble was due to a fibro-myomatous tumor of such size that the uterus, on examination, reached within about two fingers' breadth of the umbilicus. From the 12th of October to the 6th of November about eighteen hypodermic injections of Squibb's fluid extract of ergot were administered in the hypogastric region. They caused a good deal of pain and inflammatory irritation, which were relieved by cold applications, so that no abscesses occurred; small indurations, however, remained at the points of injection. During the menstrual periods the patient rested at home, taking ergot internally, fifteen- to twenty-drop doses twice a day. On the 14th of December I was called to see her at her house. She had a bloody, somewhat offensive discharge from the vagina, and suffered from great restlessness and pain of labor-like character; the vaginal portion of the uterus was softened and dilated, and a soft mass could be felt within it. On the following day, under chloroform, a considerable mass—about a pound and a half—of sloughed fibromatous tumor was removed from the uterine cavity after lateral incisions into the vaginal portion had been made. On account of the narrowness of the sexual passages and the impossibility of pulling the uterus down, I could not pass my finger high into the uterine cavity, but I was able to ascertain that a good many irregular necrotic pieces of tissue remained undetached as yet. Two drainage-tubes were introduced into the uterus, and repeated irrigations were made with a warm solution of salicylic and boracic acid, and, once or twice a day, with a corrosive-sublimate solution, 1 to 5,000. But, in spite of my endeavors, I did not succeed in preventing further decomposition; the drainage-tubes were so often blocked up by small particles of necrotic tissue that they did not act satisfactorily; besides that, their presence in the internal orifice seemed to be the source of constant irritation. I therefore removed them, and applied irrigations several times a day by passing a Fritsch's uterine irrigator high into the uterine cavity, usually injecting first a 1-to-2,000 solution of corrosive sublimate, followed by an injection of boro-salicylic acid, according to Thiersch's prescription. Very soon, with repeated chills and high fever, the palpable symptoms of peri- and parametritis set in, especially in the *cul-de-sac* of Douglas, where a fibroma, inserted at the supra-vaginal portion of the cervix, had been felt before; a diffuse infiltration and exudation could be made out pushing the lower portion of the uterus toward the symphysis. Dr. Noeggerath was called in consultation, and was likewise convinced of the extremely precarious condition of the patient. It was then decided to renew the attempt to remove the source of infection from the uterine cavity, and, on September 23d, with the assistance of Dr. Noeggerath, sloughed masses were again removed. It was discovered that, from the anterior as well as from the posterior aspect, tumor-like prominences protruded toward the uterine cavity, and that the process of sloughing was particularly seated posteriorly and toward the fundus. The uterus by this time had already become considerably reduced in size. On January 5th I made a deep incision into the exudation through the posterior *cul-de-sac*, evacuating pus mixed with small pieces of necrotic tissue, as I suppose, from the center of a fibroma which had undergone suppuration, and from that time, while the discharge from the uterus became gradually less, and almost daily small pieces of necrotic tissue were expelled, the patient's condition became decidedly better. Several times slight hæmorrhages accompanied the expulsion of sloughs. At present, for more than a month, the discharge has entirely ceased; the uterus is very little larger than its normal size; but there is still a decided induration at the seat of the para- and perimetritic inflammation, which, however, is gradually diminishing. Her general condition is very good, and twice already, if I am not mistaken, the menstrual flow has appeared again, normal in quantity and duration.

The patient is now forty-seven years of age, and certainly very near the end of her menstrual life. I think there is very little probability that a new formation of fibro-myomata will occur. I am under the impression that in this case the whole mass of the tumor has not sloughed, but that, with the gradual contraction of the uterus, several lumps have disappeared either by atrophy or by fatty degeneration. It seems, further, that in this case the administration of the ergot had a causal relation to the necrosis and elimination of the main part of the tumor.

Case III.—Miss B. L., twenty-eight years of age, was in good health until four years ago, when she began to suffer from profuse menstrual hæmorrhage and pain in the back, which were ascribed by a physician to the presence of a uterine tumor. For about three months she was treated with hypodermic injections of ergot, altogether about thirty in number, but without success. Three years ago, in making a forced attempt to prevent herself from falling down by throwing herself backward, she felt a severe pain in her abdomen and had a sensation as if something had been torn; the pain in her abdomen persisted during the summer; ergot internally was used again, but gave her no relief. In September, 1883, I saw the patient in consultation with Dr. Dieffenbach, when she presented a deep-seated phlegmon of the abdominal wall in the retro-peritoneal space below the umbilicus.

On the 15th of September, through an incision in the linea alba, a great quantity of pus was discharged; a drainage-tube was passed at one point to such a depth into a rather small appendix of the cavity as to allow of the conclusion that it must reach some distance into the abdominal cavity. After some time, when infiltration and pain had sufficiently ceased, it could be made out that a uterine tumor, originating from the fundus of the uterus, was adherent to the abdominal wall, and that a pus-cavity passed some distance into its mass. Suppuration went on for several months and the tumor gradually decreased in size, having presented originally about the dimensions of a small child's head. Small, irregular-shaped calcareous masses were repeatedly washed out or extracted from the bottom of the wound. On December 31, 1883, after having enlarged the existing opening, I removed from the narrow cavity, by scraping, elevator, forceps, and finger, quite a considerable quantity of calcareous spiculæ, shells, and irregular-shaped bodies—in all perhaps as much as a tablespoonful. Four weeks later cicatrization was complete, and since then the patient has enjoyed perfect health. A hard lump, in connection with the scar, of about the size of a duck's egg can still be felt, but does not cause the slightest inconvenience, while menstruation has at all times been normal. I can not say what connection exists at present between the tumor and the uterus, the patient not having undergone an examination of sufficient thoroughness. It seems that in this case, through an injury, perhaps by partial rupture of the insertion of the tumor, its nutrition was interfered with, until finally central softening with suppuration occurred which gradually led to its diminution and arrest of growth and development. No medicinal treatment was used after the operative interference.

Though quite a number of cases are on record in which, after the manner described in the preceding histories, fibromatous tumors have disappeared, they are rather exceptional, and, withal, this natural way of healing is not free from danger, no small percentage of cases ending fatally. We are, therefore, in no way entitled to trust to such an exceptional and unreliable course of the disease so far as to give it any important weight in regard to our prognosis of fibro-myomatous tumors of the uterus. We know only too well that sometimes these tumors will have an unbounded development, which, after they have attained a certain size, becomes dangerous, and, in an imperative way, demands our surgical help, and that so much the more as in just these cases medicinal treatment is usually nothing but loss of time.

With reference to the question how far the extirpation of the ovaries may effectually check the development of fibro-myomatous tumors, I am unable to give a satisfactory answer from my own experience. I have attempted the operation once, but only to find out that in that case the removal of the ovaries would have been a very tedious operation, and probably not much less dangerous than the removal of the whole mass. In those five cases in which so far I have seen the necessity of performing supra-vaginal amputation of the uterus for the disease in question, the tumors were of such uncommon size and were mostly so complicated by adhesions, that it would have been no easy thing at all to get at the ovaries, and this, together with the question whether in such cases castration promises the desired result, led me in all those five cases to give preference to the radical method of operating. All have ended in recovery; two of them have been reported to this society in previous years, one of them being complicated with pregnancy. The third patient was operated upon about a year and a half ago. Of the last two operations in the course of this year I present before you the tumors removed. With reference to the third of the before-mentioned cases, I should say that it was that of a married lady of about thirty-three years of age, who for several years at every menstrual period had bled so abundantly as to become quite anæmic, her whole way of living finally being devoted to the purpose of building herself up to stand the dangers of the next menstruation. She suffered repeatedly from alarming attacks of weakness of the heart, which seemed to be dilated in its right half, and there was no doubt that, every other remedy having proved ineffectual, she would finally have died from the consequences of a fibromyomatous degeneration of the uterus, which, as the specimen afterward proved, consisted of a large number of tumors of different size and location, massed together in the different layers of the uterus and forming a tumor of the size of the uterus in its seventh week of pregnancy. The operation was performed in about the same manner I am going to describe in the following cases, and recovery took place without any untoward symptom, except that about two months after the operation the elastic ligature by which the stump of the uterus had been secured passed away through the external os. The lady is now in flourishing health. About four months ago she lost a considerable quantity of blood with her urine for three or four days, with some feeling of pain in her back, and the general sensation as if she had her periods. The urine afterward became quite normal, and, as far as I know, no such hæmorrhage has since occurred. She professes to enjoy sexual intercourse without impairment as compared with her healthy period of married life before the operation. Lately she is becoming rather stout.

In January of this year Miss W., thirty-three years of age, consulted me for an abdominal tumor which had been noticed for the past three years, but only lately attention had been called to it by its more rapid growth and large size, having been the source of disturbance. The whole abdomen seemed to be occupied by a resistant, rather smooth tumor, reaching from the os pubis high up to the epigastrium and the free border of the ribs. The same was very movable, and allowed of passing the fingers partly under it toward the entrance of the true pelvis, so that on the first examination it did not seem to take its origin from a pelvic organ, though its movements were communicated to the uterus. A closer examination, however, revealed a connection with the fundus uteri, and made the diagnosis of a pedunculated fibrous tumor the most probable. In this case the operation was comparatively simple. Though it would have been possible to remove the tumor without sacrificing the internal sexual organs, I still deemed it advisable to perform supra-vaginal amputation for the following reasons: First, I thought of the possibility that, from its rapid growth within the last few months, the tumor might have assumed a more malignant character; and, secondly, several small beginning fibromata could be distinguished lower down within the walls of the uterus, which, if left, would have developed further and perhaps more rapidly.

The operation was performed in the following manner:

Through an incision in the linea alba reaching from the epigastrium almost down to the symphysis pubis the tumor was slowly and without difficulty brought out through the abdominal walls; the adhesions were but very slight. Enormously dilated veins occupied the broad ligaments. Then from both sides in a horizontal direction the broad ligaments were tied in several portions between two ligatures until close to the lateral edges of the uterus, and cut across. I then passed an elastic ligature under the peritoneal covering of the cervix uteri, and tied it by means of a coarse silk thread. About three centimetres above the ligature the uterus was amputated, and thus the whole mass removed. The tissue of the stump was then excised in the shape of a funnel, so that the mucous membrane was removed as low down as the elastic ligature permitted. At the deepest point the actual cautery was applied, and a small quantity of iodoform dusted over the eschar; the funnel was then closed by a number of deep catgut sutures, between which the peritoneal covering was adjusted by superficial ones. The ends of all the ligated tissues were then cauterized and sprinkled with iodoform, and the abdomen closed by peritoneal and other sutures in the usual manner. The patient had a very rapid recovery almost without any feverish reaction, and is so far entirely well.

In a case like this the operation does not present any very great difficulty, nor does it involve any particular danger if only the proper care is taken not to expose the patient to an unnecessary loss of blood. I think the patient, apart from the blood that was contained within the parts removed, lost hardly more than an ounce of blood. The way of passing the elastic ligature beneath the peritonæum was intended to secure a certain amount of nutrition for the stump; the latter, in fact, did not become entirely bloodless, but presented, during the act of being tightly closed up with stitches, some slight oozing, which, however, was safely checked by the sutures. The weight of the tumor now before you, after five months' preservation in alcohol, is nine pounds and a half. It is throughout all its substance a fibromyoma.

The second specimen, which I present now, was obtained by an operation of much more seriousness and difficulty. In fact, the operation was only undertaken at the urgent request of the patient. At the time of the operation she was thirty-three years of age, and from her twenty-sixth year she had suffered from profuse menstrual hæmorrhage due to a tumor. She had been treated with hypodermic injections of ergot, some of which she states were injected into the mass of the tumor itself, and gave rise to an intense peritonitis which lasted for six weeks. No relief followed; the tumor gradually increased in size. Within the last month her suffering had been most intense, she had constant pain, she was hardly able to walk, her digestion became impaired, and she lost rapidly in strength and flesh. The external examination revealed the presence of hard, lumpy, irregular-shaped masses in the lower part of the abdomen, which on the left side extended close to the border of the ribs. A large portion of the tumor could be felt from the vagina reaching far down into the true pelvis, displacing the os uteri toward the symphysis pubis, and pushing it in an upward direction, everything seeming fixed and immovable. On January 11th the tumor was removed. Gradually the numerous adhesions to the anterior abdominal wall, the omentum, and intestines, were overcome. There existed venous vessels in such quantity and enormous size as I had never seen before, and requiring careful ligation. A great difficulty was experienced in shelling out that part of the tumor which on both sides had grown under the peritonæum between the layers of the broad ligaments. At last the cervix uteri was reached, an elastic ligature applied, and the mass removed; the rather free hæmorrhage from the extensive raw surface, which corresponded to the numerous attachments of the tumor, was at last checked by ligatures, sutures, and the actual cautery. A careful toilet of the peritonæum followed, and the abdomen was closed. During the operation the patient had repeated alarming attacks of heart-weakness, which obliged me to intermit the operation and at one time apply artificial respiration. It seemed to me that these attacks depended on forced tractions, which could not very well be avoided during the attempts to get under the immovable and fixed mass. In this case the cervix uteri was entirely void of peritoneal covering, which had been lifted from it by the adjacent tumor masses. The mucous membrane of the cervix was excised as in the case before, but the indication to finish the operation was so urgent that I was compelled to desist from any further details in treating the stump of the uterus; the operation altogether lasted three hours and a half. The patient had a very protracted convalescence, disturbed by peritonitis and the formation of an abscess which discharged itself opportunely through the cervical channel; another abscess formed near the anterior abdominal wall and was opened in the line of the original incision, leaving a fistula. On April 21st I dilated the cervix on account of persistent offensive suppuration, and extracted quite a number of coarse silk ligatures, but was unable to find the elastic ligature, which apparently was safely encysted. Several other ligatures were removed through an incision in the abdominal wall, a few centimetres to the left from the original cut, and since then the discharge has almost entirely disappeared; the patient does not suffer any more, and can be regarded, I think, as definitely convalescent. The weight of the tumor presented is ten pounds.

I may be permitted to add that a patient from whom I removed the uterus for myosarcoma about four or five years ago, and whose specimen and history were presented before this society, is so far enjoying good health. I saw her about a year ago, and there was no evidence of any recurrence of the disease; she promised to let me know if in any way she should be troubled.

I should also like to mention a case of multiple fibro-myomata of the uterus in which my operative efforts were not followed by such good fortune.

A recently married woman, about thirty years of age, a nullipara, had been suffering like the above-mentioned patients during her menstrual periods. Lately a great deal of pain and tenderness in the hypogastric region had supervened, and the patient, asking for a radical curative effort, was subjected to laparo-myomotomy. Two pedunculated fibromata, of about the size of a small fist, were found arising from the fundus uteri; the one, impacted in Douglas's space, was easily removed after ligating the pedicle. The other, to the right side of the uterus and in front of the broad ligament, had become necrotic in consequence of torsion of its pedicle, and was imbedded in a sac of adherent peritonæum, which, however, could be detached without great difficulty. There was no exudation of pus or fluid; the tumor looked gray with a greenish tint, and contained no fluid blood. I tried to tie the pedicle within its living part, but a small necrotic portion remained beyond the ligature. A third, smaller myoma, of the size of a small hen's egg, was broadly inserted on the anterior wall of the uterus, right above the cervix, and for its removal and shelling out a thin layer of uterine tissue had to be severed. There was considerable capillary oozing from the bed of the tumor, and the efforts to check the hæmorrhage by ligation, the cautery, and sutures prolonged the operation. Death occurred on the beginning of the third day, apparently from septic peritonitis; no autopsy was conceded. I presume the infection may have started from the place where the necrotic fibroma was imbedded. Here, perhaps, infectious germs existed, which, though made harmless for the time by the adherent peritonæum, were set free by the operation, and found outside of their prison very favorable opportunity for their deleterious action. The torsion of the pedicle illustrated very beautifully the way in which such tumors may be deprived of their blood-supply, and finally undergo retrogressive metamorphosis.

With reference to supra-vaginal amputation of the uterus, I should like to mention in a few words the different ways in which the uterine stump is secured and treated.

Here, as previously in ovariotomy, the extra- and intra-peritoneal methods stand against each other, and on both sides equally good results are obtained. Schroeder and Martin, in their very extensive practices, trust to tight suture of the stump after funnel-like excision, Schroeder first advising the *étage* suture. They do not use the permanent elastic ligature, and are strong advocates of the intra-peritoneal treatment. So are Olshausen, who uses the elastic ligature, Rose, and others, while the extra-peritoneal treatment is given the preference by Hegar, Kaltenbach, Péan, and others, as involving less risk of septic poisoning, and leaving the stump accessible in case of secondary hæmorrhage.

There exists, perhaps, no more striking illustration of the safety of aseptic procedures than the fact that such large masses of tissue as the ligated stump of the fibromatous uterus may be left in the abdominal cavity, deprived of blood-supply, without undergoing decomposition and giving rise to infection. On the other hand, it can not be doubted that a certain amount of risk will always be attached to this way of acting; and that those methods which secure nutrition to the stump with intra-peritoneal treatment will have to be regarded as the most perfect ones. That good results can be achieved by the extra-peritoneal method nobody will doubt, and successful cases of it have repeatedly been reported in this society. I am, however, convinced that by and by, just as it has been with ovariotomy, the intra-peritoneal treatment will be more and more adopted. I should certainly give preference to Schroeder's method of securing the stump by tight *étage* sutures above all others if, with reference to hæmorrhage, I could regard it as free from all danger. It may be safe in the hands of operators who are working on such a large scale as Schroeder and Martin. I myself must confess that heretofore only the apprehension of a possible hæmorrhage has prevented me from following them. In order to combine the advantages which the elastic ligature offers in regard to hæmorrhage with those offered by suturing the stump, I tried in one of the aforementioned cases to apply the ligature beneath the peritonæum, so that a certain amount of blood could be furnished to the stump through its peritoneal covering, which of course must be detached as little as possible above the ligature. Further observations will have to be made in order to ascertain whether this procedure will always yield as good results as it has in my case.

One mechanical contrivance I would mention, and of which I like to make use in all abdominal operations where practicable, is Thiersch's ligature spindles, with or without a holder, which I presented at a former meeting of this society. They are indeed very handy, and allow of securing pedicles and fleshy adhesions with more constricting force than can be exerted in the ordinary way of tying.

The abdominal incision ought to be long enough to allow of an easy access to the operating field; I certainly prefer too large an incision to one which obliges the operator to work in the dark, or to do uncertain manipulations; for this latter reason often one of the principal dangers in these operations is incurred—namely, unnecessary and abundant loss of blood, simply because the operator does not in time and with ease get at the bleeding point. Whoever has seen those enormously dilated veins in the tumors would be convinced that bleeding from such a vessel for a very short time must be sufficient to endanger life.

For this reason also every undue tearing force ought to be avoided, and it is safer and wiser to work slowly and cautiously than to hurry at unnecessary hazard. The length of the abdominal incision adds nothing to the danger and gravity of the operation, and incisions of fifteen or more inches will heal without difficulty. To obviate loss of warmth from extensive denudation of the intestines, the use of large flat sponges dipped in a weak aseptic fluid seems to me the most commendable.

Dr. Markoe asked if the ovaries and Fallopian tubes were perfectly healthy in the first specimen.

Dr. Lange replied that they were.

On the presentation of the second specimen Dr. Lange drew attention to the fact that the tumors had grown between the broad ligaments and overlapped the uterus, as it were, so that only a small portion of the cervix was visible.

Dr. Markoe asked if Dr. Lange had ever tried Schroeder's method of closing the stump and removing the elastic ligature.

Dr. Lange replied that he had not done so yet.

Dr. Markoe then asked what kind of suture was used.

Dr. Lange replied that it was a coarse silk suture, but that he had not seen any danger arise from the elastic ligature.

Dr. Markoe thought very favorably of this new method, and remarked that to leave the elastic ligature in the abdominal cavity was a serious matter.

Dr. Gerster stated that from the published reports of Dr. Hofmeier, an assistant of Schroeder's in these operations for fibro-myomata, a serious objection was the frequent oozing caused by the stitches used to close the stump. Although the gentleman who published the report seemed to belittle this occurrence, the speaker thought it quite a serious objection, and he did not think the elastic ligature was objectionable when passed under the peritonæum, any more than the silk ligature; and, besides, it gave a safer closure of the vessels. It should be remembered that when the elastic ligature was applied it became very thin by tension, and, as far as the mass itself was concerned, did not cause more disturbance than silk.

The Chairman asked how the ligature was passed under the peritonæum.

Dr. Lange replied: "Imagine both broad ligaments being tied, there exists on either side of the uterus close to the edge an opening through which the most median ligature of the broad ligament has been passed. Between these two openings the elastic ligature is passed, underneath the peritoneal covering, first on the anterior, then on the posterior side of the uterus, and tied at the point of introduction." He had formerly used a thin leaden ring for securing the elastic ligature, which was tightly squeezed together; lately he had used a coarse silk ligature for the same purpose. In one of his cases the elastic ligature with lead ring had passed through the cervix, as mentioned before.

Dr. Gerster remarked that he would like to bring up a practical question which the general surgeon had frequently to meet, and that was in reference to the length of the incision into the abdominal cavity. He did not consider that the length of the incision materially increased the danger of the operation, but did not desire to enter into a discussion upon the subject, as his experience had been comparatively small, but still he could speak from experience of the bad consequences of too small an incision. He had witnessed a number of ovariotomies in which enormous veins had been torn across during the efforts of extracting a large tumor through a small incision, the resulting hæmorrhage being very severe, and the difficulty of finding the bleeding vessel being much increased, owing to the smallness of the primary incision, which ultimately had to be enlarged after all. He also cited one instance in which he had witnessed an extensive and fatal laceration of the intestines owing to forcible attempts at the extraction of a large tumor through a small incision. The case was in other respects a simple one and uncomplicated. Had a larger incision been made in the first place, he thought, the whole of the tumor, together with the adherent gut, could have been taken out of the abdomen without the use of force, and the adhesions removed with ease; but, owing to the accidental rupture of the intestines and consequent shock, the patient died as the result of the operation. Did time permit he could recite several more similar cases.

Dr. C. K. Briddon thought that the statistics of the English ovariotomist, Sir Spencer Wells, relating to the mortality following the long and short abdominal incisions, had exerted an unfavorable influence on the practice of American surgeons. The long incision had really nothing to do with any increase in the mortality, except that it was required in a more formidable class of operations, either as regarded the size of the tumor or the presence of adhesions. There were many and serious disadvantages in using the short incision.

Dr. Gerster thought that it was only a general surgical principle that he adhered to in this respect.

Cancer of the Tongue.—Dr. Sands presented a specimen of a portion of the tongue removed from a man forty-seven years of age, on account of cancerous disease which had begun about a year ago. It extended from the tip of the tongue backward about two inches, involving mainly the right side, but, on removal, it was found to have extended deeper into the left side than was at first imagined. The specimen was removed that day by Whitehead's method, the arteries being tied, however, instead of twisted. The speaker thought that the idea of extensive hæmorrhage in removal of the tongue was only a bugbear. During the last three operations of this kind that he had performed the loss of blood had not exceeded two or three ounces.

Dr. Gerster wished to put on record a case in which he had had serious difficulty on account of blood getting into the larynx. It was an operation involving the tongue and the floor of the right side of the mouth. The lingual arteries were tied and Whitehead's speculum was introduced into the mouth, and he then proceeded to operate in the usual manner. Hæmorrhage was slight, but a serious difficulty occurred to the respiration by a clot of blood being drawn into the glottis. Alarming asphyxia occurred and tracheotomy had to be performed rapidly; this at once relieved the patient, and respiration was again established. The patient, however, died of acute exhaustion, due to mania, at a time when the wound was nearly healed. In another case, occurring shortly after the one first mentioned, he had performed preliminary tracheotomy, using the tampon cannula; and the facility with which the operation was carried on without any danger of asphyxia was very marked.

Dr. Sands thought that in these operations about the mouth partial anæsthesia was better, as the patient then had the power and will to eject anything from the larynx should there be danger of asphyxia.

The Chairman asked if cocaine was used by Dr. Sands, and how.

Dr. Sands replied that he injected it along the gustatory nerve, the anæsthesia produced being very great, fifty minims of a four-per-cent. solution being used.

Dr. Lange asked how many injections were made.

Dr. Sands stated that six injections were made altogether. He thought the use of cocaine in these cases was of signal benefit.

Dr. Briddon stated that he had nearly lost one patient of this class during the operation, and thought that Nussbaum's method of anæsthetizing the patients was very good in these cases.

Wire Suture in Ununited Fracture of the Clavicle.—Dr. Markoe presented a patient in whom he had used the wire sutures for an ununited fracture of the clavicle. The fracture had been of some months' standing, and in March last it came under Dr. Markoe's observation, when it was found the young man was suffering from an ununited fracture of the clavicle, being unable to raise the arm up to more than in line with the shoulder. The power of lifting with the injured arm was very greatly impaired. On March 17th he was operated on, the fractured ends of the bone being sawn off so as to present a fresh surface and clean section; these were then wired together with silver wire and dressed antiseptically, the result being an excellent union of the bones and perfect restoration of the functions of the shoulder joint, the strength of the arm constantly increasing. He could now raise his hand to the top of his head and use a brush or comb. There was slight suppuration caused by the silver wires, and they were removed. After their removal the wound healed. The only case of wiring of ununited fracture of the clavicle that the speaker could find recorded was one reported by Mr. A. E. Barker to the Clinical Society of London at its meeting in December, 1885.

Permanent Relief of Stricture of the Œsophagus.—Dr. Sands called attention to the fact of his reading a paper before the society, in October of 1884, upon "Stricture of the Œsophagus," quoting as an instance the case of a young girl. He thought that it had been the general impression of late years that stricture of the œsophagus could not be permanently cured, our results being confined to affording temporary relief. But in this instance he would like to have it put on record that the relief then afforded had remained permanent up to that time, although the stricture had been excessively close. He then read the following extract from a letter just received from the father of the child referred to: "Addie is quite well. It is a little more than a year since the bougies were inserted. She eats, without the slightest difficulty, any kind of food as well as I can, and has not had, within that time, the slightest perceptible trouble."

MEDICAL ASSOCIATION OF CENTRAL NEW YORK.

Annual Meeting, held at Rochester, Tuesday, May 18, 1886.

The President, Dr. John O. Roe, of Rochester, in the Chair.

(*Concluded from page 728.*)

Graves's Disease.—Dr. William C. Bailey, of Albion, said that, in a lecture a few years ago, Dr. Jacobi had observed that so rare was exophthalmic goître, and so comparatively few had been the cases reported, especially among youth and children, that the history of every one should be presented to the profession. He then related the case of Miss A., who developed this condition at the age of thirteen, the menses just occurring. Of the initial symptoms the state of the pulse was most marked, being extremely rapid. During an intercurrent lung affection it ranged from 164 to 190, and was not perceptible at the wrist. March 13, 1885, it was as follows: Lying 157, sitting 166, standing 192, walking to window 212. With this marked difference rest was advised; the patient, however, being of a lively disposition, could not be kept quiet. Under the use of iron, aconite, and digitalis, the pulse remained unchanged. Simple general faradization was found to give the best result; twenty-eight treatments were given. On May 15, 1886, no treatment or medicine having been given since November, 1885, the pulse was 92. She was well and doing work at home for seven persons. So diversified were the cardinal symptoms in different cases, so varied their appearance and progress, that Dr. Bailey had thought it to be of interest to collect the histories of as many as could be found, and to deduce an average result in the main particulars. The number collected, many of which were incomplete, amounted to 231. Of these, there were 197 in females and 34 in males, a proportion of 6 to 1. This agreed with von Gräfe's estimate. Flint placed it higher; von Ziemssen lower. Age was mentioned 55 times, the average being 27·7 years. The youngest was 2½, oldest 66. The average age of males was 32·5 years, youngest 14, oldest 53; 47 cases made special reference to nervous complications. In 21, or two thirds, they were most prominent. The usual pulse was mentioned 32 times—74 lowest, 180 highest; average 119. This did not include extremes, some of which could not be counted. The time between the appearance of the first and second symptom of the triad, in 18 cases mentioned, averaged nearly two years, and varied from a few hours to 31 years. In the 231 cases, dilatation of the pupils was mentioned 4 times. In 72, the first symptom noticed was designated. In 63 it was the palpitation, in 8 the goître, and in only 1, reported by Bartholow, did the proptosis first appear. He could find but 5 fatal cases reported—one each by Trousseau, Grünmeyer, Constantin Paul, Hammond, and Thomas. It was safe to assume that a goodly majority, at least, of the 231 recovered partially or completely.

Pneumonia complicating the Last Month of Pregnancy.—Dr. J. H. Jewett, of Canandaigua, reported the case of Mrs. M., aged thirty-nine, who, in the course of an acute pneumonia, gave birth to a fully developed child weighing nine pounds, without any knowledge on the part of the mother that she was in labor. After taking an injection of warm water, she got up to relieve her bowels, and during the act of defecation the child was born, she suffering no more pain than many times before during the same act. At former births she had suffered many hours of protracted labor. Two were instrumental. Death occurred on the tenth day from exhaustion of the vital forces. The reasons for presenting the history of this case were—1. Reported cases of this kind were rare in medical journals, and, occurring at so late a date, were very infrequent in practice. 2. The unusual fact of painless delivery under the circumstances detailed. Also the immunity of the child from harm during four days of high temperature and dyspnœa. 3. The question arose whether labor was finally provoked by the accumulation of carbonic acid in the system, as many writers believed, or was precipitated by the administration of quinine. The reader believed the latter was the case. As an excitant of uterine action in case of feeble and ineffectual pains, he thought that the usefulness of quinine was not fully realized. It was safe, as ergot was not, and it was effectual.

Myelitis of the Dorsal Region with Marked Hysterical Symptoms; Pregnancy.—Dr. E. B. Angell, of Rochester, presented the history of a case of myelitis which was accompanied by many anomalous features, and was also complicated by the existence of pregnancy. The patient, Mrs. H., was thirty years of age, of a marked neurotic temperament, and had always enjoyed good health. Her last menstruation occurred October 18, 1885, and, five weeks after, paralytic symptoms appeared and developed with considerable rapidity. She had received several hard blows upon the back in the neighborhood of the sacrum; but at the time of examination no trace of such injuries was evident. Paralysis involved both lower extremities and the trunk up to a line on a level with the umbilicus. About the first of December last she noticed loss of sensation in the rectum and bladder, followed subsequently by entire motor palsy of these organs. Nausea and vomiting occurred and continued for about six weeks to be so serious that her life was despaired of. From the time of the complete development of the paralysis very little change was noticed other than the development of an ugly, irascible temper of a marked hysterical type. She was very exacting in her demand for sympathy, very jealous if it was at all denied her. At times she shamefully abused her nurse and family, and occasionally she had a convulsive attack of hysteria, attended with sobbing and screaming, tearing her hair and clothing, hurling any article at hand about the room, showing the worst features of uncontrollable hysterical emotion. A small hypodermic injection of morphine or a whiff of ether would quiet her excitement so easily as to determine its nature beyond doubt. Her aggravated hysterical condition masked the deeper symptoms to such an extent as to lead several physicians to believe it a case of hysterical paraplegia. The progress of the case, however, and its fatal termination, together with points in the history previously undeveloped, established, as well as could be done without post-mortem examination of the cord, the nature of the malady. Death resulted from respiratory failure. A careful search of the literature at command afforded only one similar case of gestation with paraplegia, though von Ziemssen's "Encyclopædia" noted the possibility of its occurrence. In the case referred to the fœtus was stunted and had been dead for some time, while in the present instance the mother had been cognizant of fœtal life till within a short time of death.

An Improved Self-retaining Sims's Speculum was exhibited by Dr. C. E. Darrow, of Rochester. It had no straps, and accomplished the work of the original instrument without any assistance. A speculum and saddle comprised the whole instrument. All the required variations of position were possible to this instrument. No principle of the Sims position was violated, for there were no straps to increase intra-abdominal pressure. It was absolutely self-retaining under all conditions of the perinæum, whether ruptured or not. Its absolute security and perfect steadiness gave it a decided advantage over any instrument held by the hand of an assistant.

Fundamental Gynæcological Pathology was the title of a paper by Dr. H. W. Streeter, of Rochester. [It will be published in full hereafter.]

Arbor Vitæ in the Treatment of Epithelioma was spoken of by Dr. C. H. Richmond, of Livonia. He reported several cases which were greatly benefited by its use.

The Patient her own Anæsthetizer in Natural Labor.—A paper with this title was read by Dr. W. S. Ely, of Rochester, in which he said that it would probably be conceded by the majority of his hearers that the use of anæsthetics at some period in the progress of many obstetric cases was justifiable. Lusk said (p. 219): "In my own experience during the last sixteen years there have been comparatively few labors in which I have not used chloroform or ether in some stage. The result of my experience has been to make me a warm advocate of their wide employment on the one hand, while proclaiming the necessity of caution in their use on the other." Sharing this view, he had for many years carried a bottle of ether to the lying-in room. Its use had then been determined by the conditions attaching to each case. Some labors were so easy and comparatively painless that no mitigation of the suffering was demanded, while others were attended with so much pain as to make ether or chloroform a great boon to the patient.

In stating his own views upon this subject he did not presume to imply that they represented better practice than that of many present; but they were given for the purpose of eliciting comparison and comment. It had very early become evident that the excessive and indiscriminate use of anæsthetics in labor was undesirable, worked injury to the mother and possibly to the child, and often retarded the progress of the case. He had therefore gradually come to the adoption of a plan which practically, with some exceptions, limited the use of the anæsthetic in natural labor to the period occupied by the expulsion of the child. Amid the mass of literature upon the prevention of laceration of the perinæum, he recognized but one principle of value—viz.: to retard the birth of the child as long as possible. In numerous patients—especially among the higher classes, where pelvic capacity tended to reduction and the fœtal head to disproportionate size—great care was necessary in the delivery to avoid injury to the mother. Abundant experience had convinced him that in the latter class of patients the physician could be of great aid to the patient in preventing perineal laceration by the proper use of anæsthetics and by retardation of the delivery. In order that he might have the patient more perfectly under control, he had made her her own anæsthetizer. The procedure was as follows: Dispensing with towels, sponges, and extemporized cones for the administration of the ether, he folded a large handkerchief in a cravat, two inches wide, which was spread on the patient's palm, carried on to the back of the hand, and tied around the wrist. On this the ether was poured, and the patient herself covered her nose and mouth with it. When she felt a pain, she held out the hand for the ether, the palm upward, and from the bottle, held in the free hand of the physician, a teaspoonful or more was poured. When it was exhausted she asked for more, and the moment that she became fully under its influence the active muscular effort necessary to hold the hand to the face relaxed and the hand dropped. She seldom, therefore, took ether to an extent which abolished her entire consciousness of what was going on. If this was the case, it was only momentary in duration, and the patient could be made to appreciate the peremptory command given to her to avoid any voluntary expulsive efforts when the head distended the outlet. The effort was made to consume fifteen to thirty minutes in what otherwise might be completed in three to five minutes. So the head was extruded in the most gentle way under the action of uterine contractions alone, the patient all the time under the influence of ether to an extent which abolished pain without rendering her so profoundly unconscious as to lose her power of answering to the frequently repeated command of the physician to desist from all auxiliary muscular effort. Here the speaker differed with Lusk, who said: "The anæsthetic should not be pushed to the stage of complete unconsciousness until the head begins to emerge at the vulva" (p. 220). Dr. Ely did not then maintain the anæsthetic at this point, for uterine contraction would then be supplemented by the action of voluntary muscles. Lusk had previously stated that, under the most skillful management, laceration was liable to occur unless the physician was able to control the action of the auxiliary expulsive forces. This could not be done if the patient was fully anæsthetized. After the birth of the head a similar management was required for the passage of the shoulders, which often were responsible for an extensive laceration. While many physicians would undoubtedly commence its use much earlier than was his custom, the simple method which had been described was commended as one which was efficient and satisfactory, and, if desired, dispensed with an assistant. Since the adoption of this treatment he had had fewer and lighter perineal lacerations, a result attributed to the method described. In one sense it was not new. All the text-books said: "Retard the expulsion of the head." All teachers of obstetrics lectured to the same effect, but he did not find that the way of accomplishing this was always thoroughly understood.

Polypharmacy was defended by Dr. W. J. Herriman, of Rochester. He defined the word to be the prescribing of many medicines, in contradistinction to its commonly accepted meaning—too many medicines. It was in this latter sense that the word was used by our neighbors across the therapeutic highway when they vaunted the superior efficacy of their single remedy, and informed us, through the convenient medium of our unstable friends, the non-medical public, that we were using too many drugs. It must be assumed that the polypharmacist was an honest, conscientious, and intelligent physician. The action of a man who combined from six to twenty ingredients in a prescription, without any definite idea of what he proposed to accomplish, was not polypharmacy or pharmacy at all. But when an intelligent and skillful physician combined six, or, if one pleased, fifteen ingredients in a prescription, with some definite idea of what he was about, he was using the results of the latest researches in medicine and therapeutics to the best interest of his patient. Was he not exercising deeper skill and profounder science than the one who aimed his single remedy at a solitary symptom and trusted to Providence to take care of the others? The few words were prompted mainly by the fact that so many accusations were wafted over the fence of our professional back-yard that it seemed but right to say a word in defense of the reputation of true, skillful, and honest polypharmacy.

Restoration of Crippled Joints was made the subject of a few remarks by Dr. L. A. Weigel, of Rochester, to which was added the history of an interesting case of fibrous ankylosis involving several joints. Their function had been entirely restored by *brisement forcé.*

Officers for the Ensuing Year.—The election of officers resulted as follows: President, Dr. J. P. Creveling, of Auburn; first vice-president, Dr. A. Dann, of Rochester; second vice-president, Dr. Gregory Doyle, of Syracuse; secretary, Dr. J. N. Arnold, of Clyde; treasurer, Dr. Alfred Mercer, of Syracuse. The semi-annual meeting will be held in Rochester, on the third Tuesday of November, 1886.

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Reports on the Progress of Medicine.

GYNÆCOLOGY.

By ANDREW F. CURRIER, M. D.

Parovarian Cysts and their Treatment.—Terrillon ("Ann. de gynéc.," Dec., 1885) remarks that these cysts are admitted by most authors to be caused by dilatation of the tubes of Rosenmüller, the remnant of the Wolffian body. Verneuil and his followers maintain that their origin is solely in glandular material, while Virchow and his followers affirm that they may develop from different elements of the broad ligament. Again, Sir Spencer Wells and Meadows think that they are developed from ovules which are found in the cellular tissue under the hilum of the ovary. Occasionally the cysts are multilocular and recur after evacuation of their contents, and in some cases the liquid contents are of considerable density, containing white or red blood-globules, granular matter of different kinds, cholesterin, and paralbumin. The ovary may be separated from the cyst by considerable intervening tissue. If development is decided in the direction of the uterus, the latter organ may be immobilized, a point which Sir Spencer Wells and Olshausen have regarded as of diagnostic importance. These cysts are usually of small size, but sometimes contain as much as twenty or twenty-five litres of fluid. They are not infrequently present in both broad ligaments simultaneously. They are usually found between the twentieth and fiftieth years of life. Neither pregnancy nor the sexual functions have any marked influence upon their development. The prognosis as to operation is usually good, but enucleation may be very difficult when the tumor is between the folds of the broad ligament. Rupture of the cyst and torsion of the pedicle, with their consequences, are accidents which may occur.

As to treatment, that of a medical character is out of the question. The surgical treatment may be palliative or curative, and the following conclusions express the author's convictions upon that subject: (1) Parovarian cysts may refill even after total evacuation of their contents. (2) The process of refilling is ordinarily slow, requiring three or four years or more, but may be accomplished in a few months. (3) In the interim between evacuation and refilling of the cyst a complete cure is often suspected, and may have been the cause of many premature reports to that effect. (4) Refilling after puncture is the rule rather than the exception. (5) If the existence of a cyst of this character is suspected, puncture may always be practiced. (6) Complete or incomplete ablation is, as a rule, required eventually. The mortality from such operations is, usually, not very great. (7) Ablation is preferable to injection with iodine, which is often insufficient, and may give rise to severe or even fatal accidents.

Alterations of the Ganglion of Frankenhauser (Cervico-uterine Ganglion) in Simple and Parametric Atrophy.—Freund ("Arch. f. Gynäk.," xxvii, 2) says that this nervous apparatus is formed in a very complex manner. It contains nervous filaments from the spinal cord and the great sympathetic, numerous ganglionic corpuscles, peri- and endoganglionic connective tissue, and suitable vascularity. The ganglion is enveloped in a thick sheath of connective tissue. Each of the ganglionic corpuscles presents the appearance of a fibrous ring, and most of them have two prolongations. They may be colored intensely with ammoniacal carmine. The nerve-fibers are, for the most part, large, and often present a double contour and a characteristic wavy direction. The modifications which are produced under the influence of pregnancy affect all the elements of the ganglion. It becomes hypertrophied and reaches a size once and a half or twice as large as in the unimpregnated state. This increase of volume is shared by all the elements—nervous, cellular, and vascular. There are also a hyperplasia and a new formation of elements. The modifications which are observed in the course of normal labor are of a regressive nature, intended to destroy the excess of substance which has been demanded in the course of pregnancy. In this regressive movement simple or puerperal atrophy may originate. The work of fatty degeneration which affects the nervous elements as the result of parturition, instead of being arrested, may continue under the influence of certain causes, of which phthisis, lactation, and puerperal diseases are examples. It is not surprising that this ganglion, with its numerous and intimate connections with both the spinal and the sympathetic systems, should in the course of these changes produce the most positive results. In the atrophy which is associated with posterior parametritis the lesions are quite different. If the disease has not attained a very extensive degree of severity, the alterations which are produced affect principally the connective-tissue elements. Subsequently the compressed nervous elements themselves are more or less profoundly altered. The ganglion becomes elongated and finally lost in the surrounding tissue. The ganglionic corpuscles become less numerous and the seat of brownish-yellow pigmentary deposits. Many of the nerve-fibers disappear, the effect being essentially that which takes place in sclerosis.

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New Inventions, etc.

A HAND RHEOSTAT.

By JAMES N. FAULKNER, M. D.,
WILLIAMSPORT, PA.

The following description of a simple but very useful piece of apparatus may interest some of your readers. For want of a better name, I call it a hand rheostat, and it is merely a modification of the common water rheostat.

From an ordinary hard-rubber syringe, three fourths of an inch in diameter and three inches long, I sawed the nozzle close to the butt; enlarged the orifice until I could screw in any one of the ordinary electrodes (which cut its own thread in the rubber) until it pressed against the lower end of the piston. Then, removing the piston, I replaced it by a wire of about the same diameter and a trifle longer, upon the upper end of which I turned a ring large enough to allow the thumb to enter. After passing this wire through the screw top of the syringe, I forced upon its lower end a metal washer a little smaller than the internal diameter of the syringe. This was for the purpose of keeping the piston in the center of the tube, so that it would not fail to strike the metallic end of the electrode when forced down. A small hole must be drilled in the end of the piston which has the ring, for the insertion of the pin upon the battery cord. When filled with water, the rheostat is ready for use; or, when empty, it may be used as a rheotome.

In using it as a rheostat I nearly fill it with water, so that when the piston is drawn out to its full extent it will just clear the water. This breaks the current, and permits the introduction of needles in electrolysis.

If it is desired to use this rheostat in a parallel instead of in a direct circuit, it can be done by drilling a hole in the electrode stem similar to the one in the head of the piston. Connections would then be: The negative pole of the battery to the electrode stem; the positive pole of the battery by a bifurcated cord to the piston and to the body of the patient.

I have found this simple apparatus so useful that I employ it almost entirely to the exclusion of the common electrode handle and the table water rheostat.

In applications about the head, or in applications where both hands are engaged, I set the current, galvanic or faradaic, at the highest point I may wish to use during the sitting, and make all modifications below this point with the hand rheostat.

Miscellany.

Precautions against the Importation of Disease from the West Indies.—The Surgeon-General of the Marine-Hospital Service has approved the following regulations:

"Havana, Cuba, *April 26, 1886.*

"Memorandum of sanitary measures to be observed by the owners of the Tampa and Havana line of steamships while steamships of said line may be plying between the ports of Tampa and Havana, touching at Key West, Fla., from May 15th to November 1st, and subject to such additional restrictions from time to time as may be necessary during any period of active epidemicity of infectious diseases:

"1. It is deemed of the utmost importance that the officers and crews of all vessels of this line shall be acclimated to the island of Cuba, and exempt (practically speaking) from yellow fever. Any person having had yellow fever shall be considered acclimatized.

"2. Every steamship of this line must enter the harbor of Havana after sunrise *only*, and must leave the port *before* sunset of the same day, and must not spend *any* night in said port within the period above specified. During the stay of any vessel of the line in the harbor of Havana she must remain at anchor in the open bay, in the eastern portion thereof, as remote from other vessels as possible, and to the windward of centers of population, the prevailing winds being generally from the northeast.

"3. The vessel must not hold any communication with the shore at Havana except by written permission of Dr. D. M. Burgess, Sanitary Inspector of the Marine-Hospital Service at Havana, who will give written permission to such persons to go on board as he may think proper, and *no* person will be allowed to go on board without such written permission. The officers of the vessel and all the members of the crew are forbidden from going on shore or on board any other vessel while in the port of Havana except by written authority of Dr. D. M. Burgess, as aforesaid. The provisions of this paragraph shall also apply at the port of Key West, except that the written authority required shall be given by the health officer at that port.

"4. The hatches of the vessel must be opened whenever practicable as soon as leaving the port of Havana, a wind-sail put up, and the entire interior of the ship thoroughly aired and ventilated. United States mails and passengers' baggage must be as thoroughly aired as practicable soon after leaving the port of Havana, and the vessel and baggage will be subjected to fumigation whenever deemed necessary either by Dr. D. M. Burgess or the health authorities at Key West or Tampa.

"5. The vessel must be thoroughly cleansed twice a week at Tampa, all bilge-water removed by pumping, or sponging when it can not be done by pumping, and bilge-space thoroughly cleaned and treated alternately with a solution of bichloride of mercury and chloride of lime. Particular attention must be given to water-closets and to spaces in and around wash-stands and waste-pipes at all times, and they must be maintained devoid of offensive or noxious odors of any kind. There being no necessity of having an odor from any water-closet, whether passengers', officers', or crew's, there is no acceptable excuse for its existence. Offensive odors from any receptacle for urine or any liquid in staterooms must not be tolerated. Excuses for failure in preventing them will not be accepted.

"6. Dr. D. M. Burgess will make a careful and thorough inspection of every portion of the vessel on each and every arrival at the port of Havana, also of the officers and crew, and will keep a full and complete record of each and every inspection so made by him.

"7. The agents of this line at Havana will require from every person desiring to take passage by any vessel of this line from Havana during the period above mentioned, from May 15th to November 1st, as a pre-requisite to obtaining such passage, a written certificate from Dr. D. M. Burgess, according to the form herewith attached, setting forth that such person has furnished satisfactory proof of being either acclimated to the island of Cuba or having had yellow fever, and being in no danger (practically speaking) of developing the disease after leaving the port of Havana. Passengers from Key West northward bound will be required to furnish a certificate from the health officer of that port, that they are in no danger (practically speaking) of developing yellow fever or conveying the disease.

"8. Should any case of fever of any description occur on any vessel of this line after leaving the port of Havana, it must be *promptly* reported by the captain of such vessel on his arrival at the next succeeding port, either Key West or Tampa, as the case may be, to the health officer of such place. Such fever to be considered as yellow fever, so far as further precautionary measures against its spread are to be maintained by the ship's officers, and the bedding, blankets, and clothing of the person having such fever must be considered as infected material, and subject to such conditions as may be directed by the health authorities of the port or place where such case of fever may have been reported.

"9. The bill of health of each and every vessel of this line, on each and every trip, during the period above mentioned, must set forth clearly and distinctly whether or not all the requirements hereinbefore mentioned have been fully complied with. Inspection of the vessel, passengers, officers, and crew should be practiced at Key West and Tampa."

Form of Certificate.—

"Havana, Cuba,.... ...188..

"This certifies that.... ...., native of... ...., ... years of age, color........, has produced ample and satisfactory proof to me that .... has resided for .... in the island of Cuba, is acclimated to the diseases of the tropics, and is in .... health at the present time.

"......... had .... yellow fever in the year ......, at ......"

An Improvement in Maltine is announced by the Maltine Manufacturing Company. The product now furnished is not so viscid as that formerly in the market, and hence it is more easily administered. Among its new compounds, the company calls special attention to one containing maltine and *Cascara sagrada*, recommended as an efficient, safe, and agreeable laxative combined with a valuable nutrient.

Jensen's Crystal Pepsin.—The "Medical and Surgical Reporter" says: "The doubt which many physicians harbor in reference to the effect of pepsin arises from their use of an article which is impure. We agree with several of our contemporaries in recommending to such the employment of the crystal pepsin, as prepared by Dr. Jensen, of Philadelphia. He has long and intelligently made a close study of the most scientific processes for obtaining this therapeutic substance in its greatest purity, and in a form least liable to undergo change. His success has been marked, and we can give personal testimony to the value of his product."

A Controversial Correspondence about Ovariotomy.—We take the following letters from the "British Medical Journal" for June 19th:

"Sir: Have we not had rather too much of the ovarian biography of Wells according to Tait's 10th edition?

"It is notorious that the first and second phases of ovarian history, according to Tait, left ovariotomy in 1857 on its death-bed. Equally notorious is it that new life was put into it from the moment Wells took it in hand. The late Dr. Robert Lee had denounced it at a memorable meeting of the Royal Medical and Chirurgical Society. In my hearing, he stigmatized ovariotomists as 'belly-rippers,' and then and there arose a murmur of applause from those present.

"No one at all acquainted with the late Mr. Wakley can think of him as narrow-minded or captious in regard to methods tending to professional advancement. He told me himself he was inclined to hold an inquest on every fatal case.

"It was not long before Wells ventured to bring his first account of his work to the notice of the Royal Medical and Chirurgical Society. The prevailing hostility ceased at once. The president declared that, in his opinion, abdominal surgery presented a new and altogether hopeful aspect. This opinion was received with acclamation.

"This word 'revival,' so caviled at by Mr. Tait, made its first appearance in my sketch of the history of the Samaritan Hospital, and my connection with it, written for one of its annual reports. Sir Spencer Wells adopted it fairly enough, in illustration of part of his address before the Areopagus (so-called), in the Midlands. In reply to inquiries, Wells stated that in not one case among his 1,000 ovariotomies had he perceived any sign of disease in the tubes, as described by Tait; but, he added, 'I suppose they all go to Birmingham.'

"It is well not to forget that Mr. Tait looks upon harmless banter of this kind as injurious to his well-earned reputation; but what did he himself say about these cases? 'These poor women, having gone the round of the profession and having submitted themselves to all sorts of treatment, at last found their way down to me.' (I quote from memory.)

"Ovariotomy, Mr. Tait alleges, during his first and second phases of its history, was as successful as other operations. Very likely those were times when the majority of operations comparable in magnitude with ovariotomy ended fatally.

"I think I can remember that Mr. Tait stated in one of the journals that, had he started with a mortality of 25 per cent., he would have given up the operation; but why? And, if so, what meaning is there in his laudation of ovarian work during the first and second 'phases' of his history?

"I heartily congratulate Mr. Tait on his marvelous works, not the least of them being 139 ovariotomies in succession through an incision only two inches long, without a death; but I defy him, had he the choice of any of the five hundred fingers of the Uranids, to deal with half the cases which come to the Samaritan Hospital, through an incision two inches long only.

"I need not dwell on the inference except, perhaps, to remark that the loss of a case, the operation accomplished through an incision so limited, would very much surprise the surgeons of the Samaritan Hospital. On the other hand, should I find the signs of mischief in the tubes resist a few flying blisters and appropriate treatment, I should not hesitate to send the case in all confidence to Mr. Tait.

"Remaining, sir, yours obediently, Henry Savage."

"Sir: The aspersion cast upon me by 'Historicus' for having written as I did in 1877 about Sir Spencer Wells and ovariotomy is thoroughly deserved. I have, however, the explanation to offer that I accepted what Sir Spencer Wells said about himself, as others did, without inquiry. In fact, the dedication of my book is from Sir Spencer Wells's own pen. Some time later—in 1871, I believe—I came across a pamphlet on the history of ovariotomy, by Mr. George Jesse, which showed me the necessity for a full inquiry. I made a careful research, and unearthed much additional evidence, which completely shows (*a*) that ovariotomy had never died since 1809, and, therefore, was not revived by Mr. Wells in 1857; (*b*) that the first operator in England, Dr. Charles Clay, had, over the whole of his series, almost exactly the mortality obtained by Mr. Spencer Wells over what was, at that time, the whole of his work, 25 per cent.; (*c*) that Mr. Baker Brown had reduced the mortality on the right lines to 10 per cent.; (*d*) that Mr. Wells sent it up again to 29 per cent.; (*e*) and, finally, that it would have been better for humanity if Sir Spencer Wells had continued his services in Her Majesty's navy, and had never touched abdominal surgery. All the evidence in favor of these conclusions is given in my edition of 1883, which is not dedicated to Sir Spencer Wells.

"The last paragraph of the letter of 'Historicus' is incomprehensible. He says I suppress 'the fact that, in successive periods of five years, the mortality in his (Sir Spencer Wells's) practice had been reduced from thirty-four in the first hundred to eleven in the tenth hundred.' I had no object in suppressing such a fact, for, when it is displayed, it proves my point exactly. Here are the figures, and let any one try to prove anything else out of them.

"*Sir Spencer Wells's Thousand Cases in Hundreds.*

	Mortality per cent.
"First hundred	35
"Second "	29
"Third "	23
"Fourth "	22
"Fifth "	20
"Sixth "	29
"Seventh "	24
"Eighth "	24
"Ninth "	17
"Tenth "	12
"1,000	23·5

"No remarkable diminution of the mortality is visible until the ninth hundred, during the current of which he gave up the clamp, practically in December, 1877, actually in August, 1878. In fact, 'Historicus' is taking some wild statement without investigation, for even when the figures are twisted into five-year periods, here is what results:

"Five-Year Periods.	Cases.	Deaths.	Mortality per cent.
"1858–1862	53	17	32
"1863–1867	192	53	27·4
"1868–1872	281	67	23·8
"1873–1877	362	85	23·8
"1878–1880	112	13	11·6
	"1,000	235	23·5

"This proves conclusively the view which I have taken all through this controversy, that the clamp was at the bottom of all the trouble; and that the departure from the lines laid down by Nathan Smith and Baker Brown—the adoption of the clamp by Sir Spencer Wells—was a retrograde step. It has actually stopped the development of abdominal surgery for a quarter of a century, besides costing numerous lives which might have been saved had the departure never been made.

"A reference to the dates now explains the difference between the views I expressed in 1877 and those of 1886, as placed in parallel columns by 'Historicus.' No diminution of any importance occurred in the mortality of Sir Spencer Wells's practice until after I had written what I did in 1877; but the moment I recognized the fact that the intra-peritoneal method was the one which ought never to have been given up, a recognition which I owe entirely to Keith, the moment I discovered what eminent service Baker Brown had done to abdominal surgery, then my views about Sir Spencer Wells necessarily changed. As I have said, I do not regret the change. What I regret is, that I ever entertained the views that I published in 1877, for, if I had not been led astray by Sir Spencer Wells's practice, in my own experience, I should have been able to save a large number of lives which otherwise were sacrificed. This change of opinion was forced upon me by the facts of the case, and the only ill result is that Sir Spencer Wells has taken the alteration as a personal matter, has deprived me of his personal acquaintance, declines to meet me in consultation, and ignores my letters and telegrams when I communicate with him about patients.

"This may be a method of controversy gratifying to him, but it constitutes no effectual argument.

"I am, etc., Lawson Tait."

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Original Communications.

THE PATHOLOGY AND TREATMENT OF ENLARGED PROSTATE.*

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In selecting a subject for presentation to the society this evening I have been guided by two motives—first, the short time allowed me for preparation necessitated the selection of some subject with which constant experience had rendered me familiar; and, second, my own consulting and general practice has given me the impression that, by the profession generally, little attention is given to the treatment of the earlier stages of enlarged prostate, while the general management of its more advanced phases seems equally a matter of routine, based upon vague ideas of the conditions which really exist. Until a very recent period, equally celebrated authorities have differed as to the gross anatomy and physiology of the organ involved; and, as a consequence, many of the phenomena observed in the functional and pathological history of this portion of the genito-urinary apparatus are but imperfectly understood, rendering the treatment of some of its diseases in the highest degree empirical and unsatisfactory. Such being the case, I have thought it worth our while to run briefly over a few of the best-known facts which have been accumulated in regard to the prostate gland itself, and especially those bearing upon the diseased condition which is about to be described.

The adult prostate, then, is an organ resembling in shape and size an ordinary horse-chestnut, lying in the erect position of the body, with its flattened surface upward and its apex applied to the deep layer of the perineal fascia, or "triangular ligament," which here gives passage to the urethra. The base of the gland is applied closely to the vesical outlet, and through it the prostatic urethra runs, coursing along its upper portion in such a manner as to have the mass of the gland below it, or between it and the rectum. Invested with a true capsule of its own, and held firmly in its place by the perineal fascia anteriorly, and the recto-vesical fascia, or rather a prolongation from it behind and underneath, the prostate shows, upon careful dissection, a complex arrangement of muscular fibers and glandular tissue. The former are derived from and are continuous with the muscular apparatus of the bladder, the longitudinal fibers of the viscus, or its external layer, going to form the mass of the gland at its base, while those of the circular or internal layer (which are a direct continuation of those of the bladder) are prolonged into the gland, and disposed around the tube of the urethra in an annular manner, gradually diminishing in thickness and quantity until they become a thin layer investing the membranous urethra, where they cease entirely on reaching the bulb.

The *glandular tissue*, which, according to Thompson, forms about one third the bulk of the entire organ, is found most freely distributed in what are known as the "lateral lobes" of the organ, or those portions lying to either side of its median line. It consists of a lobular or racemose arrangement of glandular structures mingled indiscriminately with muscle fibers or bundles, having no definite anatomical arrangement, except a tendency to diverge from the center of the lobe toward its periphery, as demonstrated by Kölliker and Thompson. The irregular distribution of these muscular bands leaves numerous interstices, which are filled with the glandular or secreting structure. In the median portion of the gland, along the line of union of its two lateral lobes, another collection of glandular tissue exists, and is most densely deposited at a point which underlies the neck of the bladder. The secretion from all these glands is conveyed by twenty or thirty minute ducts to the floor of the prostatic urethra, where they empty just back of the ejaculatory ducts and along the sides of the veru montanum.

The lobed arrangement which characterizes the prostate is simply the survival in the adult organ of a type which, as in many other portions of the body, exists at an earlier stage of development. Up to the fourth month of intra-uterine life two oval bodies exist, one on either side of the urethra, and at a later period form by their union a single organ. The prostate is richly supplied with blood from three sets of vessels—the vesico-prostatic, branches of the inferior vesical, and pudic arteries. Its blood is returned to the heart by numerous veins, which are collected into a plexus about the neck and base of the bladder, and empty into the internal iliac vein. They are frequently the seat of phleboliths in aged men, and the source of persistent and dangerous hæmorrhage when wounded, whether by accident or during the performance of operations involving the deep structures at the neck of the bladder.

A free nervous supply is also provided for from the inferior hypogastric plexus which sends a prolongation to the prostate and penis, called the prostatic plexus.

From the brief description thus given, it will be seen that in the prostate gland we have an organ which, by its peculiarities of structure, is liable to processes in which tissue changes of a character resembling those of exaggerated nutrition may easily occur under favorable circumstances. And in this fact the majority of writers upon its diseases have seen sufficient predisposing cause for the condition which is now under discussion. Accordingly, excessive sexual excitement, local nutrition, as modified by gouty, rheumatic, or strumous dyscrasia, or increased by excessive vascular supply, stricture, inflammation, etc., have all been adduced by them as exciting causes of prostatic enlargement. The obvious objection to all these theories is the one adduced by Thompson, that the causes cited are all active during young adult life and manhood, a period at which enlarged prostate is all but unknown, except from acute diseases, which have nothing to do with the common form of the complaint. Approaching the question of ætiology from the opposite side, we find the testimony of all investigators as to the morbid histology of the growth agreeing that two conditions are found: 1. A true hypertrophy of the secreting structures of the gland, or of its muscular elements, or of both, the proportion varying with almost every case examined; or, 2, a true fibrous outgrowth or tumor developing in the substance of the gland and acting precisely as in the other soft parts of the body. In a given case, any or all of the conditions described may exist, the largest masses, usually removed post mortem, containing variable proportions of both fibrous and gland elements, while, on the other hand, a prostate normal in size may contain a small fibrous outgrowth, and, from its anatomical position, be as dangerous to the safety of the patient as its more formidable-looking fellow. Commenting upon the relation of the histology of this affection to its ætiology, Sir Henry Thompson has presented a theory which, to my mind, is so much more satisfactory than those of previous writers that I give it in full in his own words:

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* Read before the Brooklyn Pathological Society, March 11, 1886.

> It is an interesting fact that the prostate, male homologue of the uterus, should exhibit analogies in many points of view with the latter organ in regard to its tendency to overgrowth. The most obvious explanation, and the conclusion which, after a careful examination of the subject, is that which appears to me better supported than any other, seems to be offered in the simple fact, now completely established, that the structure in both is exceedingly prone to develop among its component elements minute independent or isolated formations, possessing an organization identical with itself, which formations in the majority of cases do not increase beyond a certain very limited size, and do not interfere with the performance of any known function in either sex, but which, in exceptional instances, continue to be developed for the most part only during a certain limited period of life, say between thirty-five and fifty in the female, and between fifty and seventy in the male; in the one case appearing in the form of uterine hypertrophy or tumor, in the other in the form of prostatic hypertrophy or tumor. Whether the formation of these products is anything more than a contingency of structure—that is, whether it is to be connected with any functional action common to the structure in both cases—is more doubtful.

In spite of this theory, however, the author vigorously combats the idea that hypertrophy of the prostate or tumor is a necessary concomitant of old age. In fact—as has been proved by laborious investigations—it is an abnormal and exceptional condition occurring in about one out of every seven or eight males who have reached the age of sixty, perhaps one out of three having a slight tendency to enlargement scarcely recognizable during life, either by symptoms produced thereby or on physical examination, so that, in general practice, the number of persons who actually suffer from forms of prostatic trouble, needing surgical relief, is much smaller than is generally supposed.

The nature of the complaint, too, the insidious and gradual approach of its early symptoms, and the readiness with which old men apply all sorts of domestic and proprietary remedies to the treatment of their ailments, all serve to keep the patient away from the surgeon until compelled to seek his aid by some new phase of the disease which develops its serious nature.

This is peculiarly unfortunate, because it is at these very earliest stages that much can be done to prevent or favorably modify the course of the disease, and it is then that the family physician is usually consulted, or, at any rate, is made aware of facts which should arouse his suspicions and lead to a thorough examination of the case.

The first thing which usually attracts the patient's attention is an unwonted difficulty in commencing the act of micturition, and a decrease in the force with which the stream of urine is projected, so that, if water is passed in the standing posture, the stream falls almost directly upon the feet. The patient also notices that, after he has apparently completed the act, small quantities of urine dribble away, soiling the clothing and giving rise to the idea that he is suffering from paralysis of the bladder or incontinence—an idea which is often confirmed by the symptoms which soon follow and will be spoken of presently. Another very common symptom of this stage of the disease is pain, either in the lumbar or sacral region or along the sciatic and femoral nerves.

This so closely resembles the lumbagoes, rheumatisms, and sciaticas of advanced life that patient and physician are both deceived into inappropriate and, of course, useless treatment, during which increased frequency of micturition, aching pains, and fullness in the rectum and perinæum, or about the hypogastrium and neck of the bladder, with increased difficulty in starting the stream of urine, and changes in the appearance and odor of the fluid itself, all excite the patient's alarm and lead him to seek surgical assistance, if he has not before done so.

Many patients, of course, present themselves who have, according to their habits of life and temperaments, complications which at once arouse the suspicion of a watchful physician as to their origin in prostatic enlargement.

Among these are hæmorrhoids, involuntary discharge of fæces accompanying the act of micturition, prolapsus of the bowels, muco-purulent discharge from the urethra, swollen or irritable testis, frequent erections and involuntary seminal discharges, generally occurring at night, hernia from the severe expulsive efforts required to empty the bladder, and various nervous symptoms of a reflex character. These disorders, however, are by no means constant, and are only mentioned because of the important fact I am trying to give prominence to—that the earlier stages of the disease are so easily overlooked by all interested as to be completely masked by the very complications they elicit. Assuming that (as in many typical cases) the disease has progressed to the point just described without alarming symptoms, a new feature now presents itself which merits special description, as upon its correct interpretation depend the proper treatment of the patient and his ultimate safety. This is retention of urine, either partial or complete. Partial retention is altogether the more frequent form at this stage of the disease, and is caused in the following manner:

The gradual enlargement of the prostate, which has been going on for months, possibly for years, before this condition obtains, has resulted in the elongation of the prostatic urethra and gradual elevation of the vesical outlet, so that the floor of the bladder, which normally is an inclined plane sloping toward the urethra, has now become a cup or cavity capable of containing several ounces of urine. The result of this is obvious. The vesical outlet being above the water-level of a portion of the bladder's contents, ounces of decomposing urine are continually in contact with its mucous membrane, and cystitis, with all its complications of calculus, dilated ureters, and diseased kidneys, is or may be added to the rapidly increasing list of the patient's sufferings.

As a direct sequence of these, the contractile power of the bladder is steadily lessened, or, even if hypertrophy of its walls exists, it is incompetent to wholly overcome the resistance of the narrowed and tortuous prostatic urethra, and more or less constant dribbling of urine now makes its appearance, especially at night, when voluntary control is suspended by sleep, while the urine habitually retained in the bladder increases from ounces to pints or even quarts, and the viscus is only partially emptied, even when to its own contractility the weight of accumulated fluid, the pressure of the abdominal muscles, and the advantages of position are all added.

This constant dribbling of urine is frequently mistaken by the patient and his physician for incontinence due to paralysis of the neck of the bladder until, from exposure to cold, dietary excess, or some slight additional irritation to the bladder, complete retention is produced, and the surgeon is enabled to make a correct diagnosis. These are the cases which, undetected or unrelieved, frequently end in death from uræmic poisoning. Where the enlargement of the prostate has been chiefly backward toward the rectum or laterally, so that compression has been moderate upon the urethra, complete retention, unpreceded by overflow or untoward symptoms other than frequent micturition, is sometimes the first symptom which leads the patient to seek medical aid, and commonly follows some irregularity in diet or mode of life. In all such cases a partial retention may have existed for a long time previously, and too much care can not be exercised in making a clear and correct diagnosis of the exciting cause.

On the other hand, a fair proportion of the cases which follow the usual course of gradual impediment to micturition, partial retention, overflow, etc., show, on examination, nothing abnormal in size or density of the prostate, nor is the urethral curve lengthened, nor the vesical neck lifted up.

Such cases show, on examination, one of two conditions: either a hypertrophy of the median portion of the gland (described by Home as the third lobe) protruding up against or into the vesical outlet, or a fibrous tumor of the variety described in the beginning of the paper, which has gradually grown out of its bed in the gland and become polypoid in its character, just as similar stages mark the growth of submucous fibroids of the uterus.

Having reached such a stage in its history, a prostatic fibroid acts as a ball-valve, and produces many of the symptoms of ordinary prostatic disease, so that in any given case *the absence of enlargement of the prostate, as predicated upon urethral and rectal examinations, is by no means a sufficient reason for a diagnosis of vesical paralysis or incontinence;* and in such a case a more thorough examination will, as a rule, reveal the condition described.

As a matter of fact, paralysis of the bladder (unless caused by spinal or cerebral disease) and incontinence of urine are among the rarest forms of disease in the adult male, and the latter is, as a rule, a certain indication of prostatic disease, the infrequent exceptions to this rule being found in cases of organic stricture of the urethra. Of the advanced stages of prostatic hypertrophy it would, I think, be hardly profitable to speak, except in the way of treatment, since they consist essentially of aggravated forms of conditions already described, or complications in the shape of renal and constitutional disturbances, stone in the bladder, gradual or sudden failure of the vital powers, etc., with all of which you are familiar.

A few words as to the diagnosis of some of the more obscure or uncommon forms of prostatic trouble may not be inappropriate.

Digital examination may be most conveniently made by the method first suggested, I believe, by Dr. Otis, which consists in having the patient stand with his back toward the surgeon, who, seated on a chair, directs him to bend forward as far as possible. The finger, well oiled, is then introduced its full length into the bowel, and the base of the bladder, seminal vesicles, and prostate are examined with care. If familiar with the feel and size of a normal prostate, the physician can have but little difficulty in recognizing any considerable departure therefrom; and, in most cases, the portion of the gland affected, with the character and size of the enlargement, may all be satisfactorily determined by this method of examination. If, however, nothing abnormal is discovered in this manner, a full-sized silver catheter should, if possible, be passed into the bladder. If urine is discharged through this when only six or seven inches of its shaft have penetrated the urethra, and especially if its handle is not much depressed, no great enlargement exists. If, however, it is necessary to bury it to the depth of eight or nine inches or more before urine flows, and especially if, as it passes, the handle has to be depressed to a horizontal line, an instrument known as a prostatic catheter should be introduced and used, not only to measure the distance of the vesical neck from the meatus, but, by conjoined manipulation from the rectum, to estimate the thickness of the intervening tissues. If, in its introduction, the handle is deflected to either side as the beak passes the prostatic urethra (assuming no false passage to exist), there is a strong probability of unequal lateral enlargement, the greater hypertrophy existing on the side toward which the handle turns. If, however, hypertrophy does not exist to a sufficient degree to account for all the symptoms present, or if a suspicion of tumor or calculus is entertained, the catheter is wholly unfit for purposes of examination, and Thompson's searcher should be passed well into the bladder and rotated by means of its cylindrical handle until its beak occupies the *bas-fond* of the organ, when, without changing the position of its beak, it is partly withdrawn from the urethra. This movement causes its concave beak to hug the posterior surface of the enlarged gland, or to touch any outgrowth or tumor which may be present, thus enabling the operator to form a correct idea as to its size and shape. By repeating the movement and lateralizing the beak, emptying or injecting the bladder through its hollow handle, etc., a very thorough examination may be made, even of obscure cases, and their difficult points cleared up. By one or all of the methods just mentioned, a sufficiently clear idea may be obtained of any ordinary case of prostatic overgrowth to guide the surgeon in his selection of the treatment.

In the earlier stages of the disease, as in those of urethral stricture, much may be done to prevent the development of any, or at least of any *serious*, results in the way of obstruction, retention, etc., and hence the great importance of an early recognition of its threatened approach. For the method of treatment about to be described the profession is indebted to Mr. Reginald Harrison, of Liverpool, who has recently described it in a little pamphlet, "On the Prevention of Prostatic Obstruction," and it is briefly this: Having under his care a gentleman who, several years before, had been informed that he was affected with the early stages of prostatic enlargement, and who, in consequence of his dread of the disease, had daily passed a full-sized gum bougie upon himself, and, having occasion to make an autopsy upon this patient after his death from some other cause, he having meanwhile presented no signs of prostatic obstruction, he found, to use his own words, that, "though the middle portion of his prostate was considerably enlarged, the *level* and *patency* of the prostatic urethra were in no way altered, the growth or enlargement being, as it were, deeply bisected by the canal which the daily use of the instrument had impressed upon it." Struck by the beneficial results of the treatment, as seen in this case, Harrison began experimenting, and has formulated a treatment which he has now successfully used for several years, which is certainly an improvement upon the earlier attempts of Mercier and Thompson, by dilatation or divulsion, and elastic compression.

Immediately on the detection of urinary obstruction the patient is put upon the daily use of an olivary bougie, the size of which is determined by the surgeon, until the patient is wholly competent to manage this part of his treatment for himself. If, for any reason, the daily introduction of this instrument is undesirable or impossible, the patient is compelled to attend to it at least three times a week, upon retiring at night. The peculiar shape of the instrument exercises pressure upon the narrowed canal as it is passed through into the bladder, and again as it is slowly withdrawn—a point which Harrison deems essential, as it corresponds with the direction of the dilatation caused by the stream of urine. Some stress is laid upon the position of the patient while passing the bougie, which should be a recumbent one, with the buttocks slightly raised, the instrument being passed slowly down the urethra until fairly in the bladder, and then gently withdrawn.

This procedure should be at first repeated every forty-eight hours, then every twenty-four hours, and, where enlargement is already somewhat advanced, twice daily, no limit being put to the time over which treatment should extend, simply that it should be persevered in long after all signs of obstruction have ceased. Where any intolerance to the treatment exists, careful inquiry into the presence of abnormal quantities of uric acid in the urine is suggested—a hint which holds good over the entire field of urethral therapeutics.

Where residual urine habitually remains in the *bas-fond* of the bladder, a catheter shaped like the bougie is used, and all the benefits of self-catheterization are added to those just mentioned. I have at present under my observation an old sea captain whom I have directed in the care of his own case for the past six years. During the last four he has been steadily following the foregoing plan, and for the past year has only used his catheter once or twice for a few days, because he fancied his troubles were about to return. When he began treatment he had already had one or two retentions, and was suffering from a chronic cystitis. The first use of the instrument was followed by an aggravation of his cystitis and a swelled testicle, but tolerance was at length established, and he is now free from all obstructive trouble.

In regard to the management of the complications which exist during the early or moderately advanced stages of enlarged prostate, time will only allow the mention of two—residual urine and cystitis—and in both cases the question of self-catheterization is the first to be settled, if ultimate success is to be achieved.

A careful study of the peculiarities of each case can alone determine what form of instrument will best suit a given case, though practically the choice is limited to one or two of the varieties about to be mentioned.

The surgeon must be prepared to give much time and trouble to the examination and instruction of his patient until dexterity and self-confidence have been acquired in the use of the instrument chosen, and then a small stock should be selected by the surgeon himself, and kept by the patient for daily use. He should be instructed in the dangers attending the use of imperfect or brittle rubber and gum instruments, and should pay particular attention to the edges of the eye, lest an irregularity in its surface set up irritation and inflammation of urethra or testicle. All these points being attended to (and they amply repay one for the labor expended), the patient, who may have simply residual urine, is to be treated in accordance with the amount habitually retained, as ascertained by passing a catheter immediately after the patient has passed his water in the ordinary manner. If only two or three ounces are withdrawn, emptying the bladder once a day will suffice, say before retiring; if double the quantity, twice daily; if more is retained than is habitually expelled by voluntary effort, then three times a day—say at 6 A. M. and 4 and 12 P. M.—thus giving the patient longer hours of sleep than he might otherwise procure. I have several patients who use the catheter five or six times a day or oftener; but the rule is as I have just stated. No harm, however, follows the frequent use of a properly selected instrument, as the urethra is wonderfully patient, and, like the bladder, tolerates a quantity and variety of treatment wonderful to contemplate. Should decomposition of urea have occurred before the case comes under treatment, irrigation of the bladder should be practiced as in cystitis.

Sooner or later, however, in all cases which have not been treated early, and in some of those which have, the latter disease makes its appearance and must be managed, so far as general treatment goes, on ordinary principles.

Each practitioner has his own favorite formulæ. My own preferences are decidedly in favor of the uva ursi, or triticum repens, in combination with buchu, where it will agree with the stomach. Better results are obtained in some of these cases by giving the alkalies, citrate or bicarbonate of potassium, or liquor potassæ, largely diluted; or, where great irritability exists, a strict diet of milk and Vichy, or milk and limewater (equal parts). Irrigation of the bladder by the apparatus of Van Buren and Keyes has, however, given better results than any other treatment with which I am acquainted.

A modification which I have used for some years seems to be such a decided advance that I am sure no one who tries it will return to the old method. It consists in using water, not only tepid, as suggested by Keyes, but *hot*—as hot as the patient can bear it. I have been in the habit of beginning with a solution of borax (about fifteen grains to the pint) at a temperature of 100° F., and injecting a quantity slightly below that habitually contained by the particular bladder under treatment, then by daily additions of an ounce or two, steadily increasing the amount until the whole pint or more could be retained for periods of time ranging from five minutes to two hours. As tolerance was established, I have increased the strength of the borax in the solution to ʒ j, and the temperature to a point limited only by the feelings of the patient. About 112° to 120° F. is the ordinary limit; improvement has been rapid in most cases submitted to this treatment, and increase of comfort obtained in all. Occasional small injections of astringents may be made by the surgeon, such as argent. nit., ℈ j, aquæ, ℥ j, recommended by Gross; or by Thompson for daily use, acetate of lead, gr. j; aquæ, ℥ iv.

The use of opium, belladonna, and hemp by the rectum will aid in procuring rest at night where great irritability of the bladder exists; but for soothing this, where the patient can be visited by his surgeon, Harrison's catheter is one of the best agents at our command.

The model exhibited was sent me through the courtesy of Mr. Harrison, and with it, as you see, the bladder can be emptied, and then, without withdrawing the instrument, a medicated suppository dropped into the organ and left to dissolve. The suppositories I show you contain each one quarter of a grain of extract of belladonna, one quarter of a grain of sulphate of morphine, and three grains of cocoa butter. Iodoform, etc., can be used in the same manner.

So much for the treatment of the principal features of the disease I have been obliged to describe in so hurried and imperfect a manner.

One still remains which I can not omit touching upon, because the utmost resources of our art are often severely tested in its management, and slight departures from acknowledged principles of treatment are often followed by rapidly fatal results. I allude, of course, to acute retention of urine existing as a complication of enlarged prostate. This is almost always due to some exciting cause, such as exposure to cold or wet, slight excess in eating or drinking, unwonted exercise, etc., the action of which, on the sensitive prostate, is to produce congestion or even inflammation, as manifested by muco-purulent discharge from the urethra. The occurrence of retention is usually announced by symptoms with which all are familiar, and the indications for its treatment, viz.—relief of the over-distended bladder—only too plain. But the embarrassments which surround the operation are many. If the patient is one who has been under the care of an intelligent practitioner, and is accustomed to catheterization, but little difficulty is encountered; but in many cases the sufferer is a stranger to the surgeon, who, called in an emergency, must deal with the case as he finds it.

As a rule, soft instruments are to be first employed; and of these my own preference, in case the urethra is undamaged by previous manipulation, is for the rubber instrument known as Nélaton's. This failing, I try the metallic instrument made from a spirally curved wire ribbon, known as Gross's; not succeeding with these, an over-curved gum-elastic instrument, or the French olive-pointed, may succeed. The celebrated catheter of Squires has a deserved reputation in these cases, and was invaluable before the introduction of the flexible instruments now used. If false passages exist, or if the obstruction is due to an enlarged median portion, the elbowed catheter recommended by Mercier may often succeed, or a two-foot guide may be introduced if the canal is *very* narrow, and over it a small metallic or open-ended soft catheter be conducted into the bladder. Failing in all these attempts, the bladder may in rare cases be still reached by a silver prostatic catheter, an instrument which, in spite of its decreasing popularity, I do not feel like dropping from my armamentarium, as I have succeeded several times in thus emptying bladders upon which everything else had been tried in vain.

Valuable assistance can be given to the points of several of these instruments by a finger introduced into the rectum, and serving to guide them over the obstruction. This is especially valuable in cases where danger of creating a false passage exists, the point of an unyielding instrument being easily swerved from its course, and if undue force is employed entering the tissues about the neck and base of the bladder, or tunneling its way between the prostate and rectum.

I have seen several cases in which death occurred within a few days after the wounding of the deep urethra from instruments used by patients themselves. In one, a patient of Dr. Skene's, an old man of seventy-four pushed a bougie which he had mistaken for a catheter directly into an enlarged median lobe, which, having reached the size of a small fig, lay directly in the track of the urethra, and gave rise to such severe hæmorrhage that the patient yielded to the exhaustion and shock incident to his injury within four days. Another old man of sixty-two, seen with Dr. G. Ostrander, broke a defective catheter in his deep urethra, and, although the piece was passed immediately after, with a large quantity of bloody urine, death ensued in about thirty-six hours. Several patients have within the last six months been sent into my service at St. Mary's with fresh false passages, or copious hæmorrhages, the results of accidents during efforts to relieve retention due to prostatic obstruction. Fortunately for the surgeon, urinary extravasation is a rare complication of the accident under discussion. If the patient survives the immediate hæmorrhage and shock, much can be done to alleviate or even remove the conditions present. The great dangers are hæmorrhage, shock, or pelvic cellulitis due to wound of the investing fascia, or peritonitis secondary to the other complications. A glance at the anatomy of the parts concerned will give the reason for the facts just mentioned. Urinary extravasations, as a rule, occur in portions of the urethra anterior to the triangular ligament, and find their way into the cellular planes which are bounded by the deep perineal fascia, and the sheath of the penis, or "Buck's fascia." Hence we find all grades of inflammatory action following wounds in this vicinity, from simple perineal abscess to gangrenous destruction of all the tissues contained in the inferior or penile chamber of Tillaux, the scrotum, penis, and cellular tissue of the pubes and abdominal walls.

Urinary extravasation due to injury of the prostate, as just stated, is rare, and, when it does occur, is a most dangerous and insidious complication. The point of injury is, as a rule, some portion of an enlarged middle lobe, and the gland is tunneled backward into the prostatic or superior chamber of Tillaux, giving the extravasated fluids access to the anal portion of the perinæum and sub-peritoneal cellular spaces, and ischio-rectal fossæ. Of course in these cases the genital organs are absolutely uninvolved, and, unless one is on the watch for every new symptom which may follow the infliction of an injury during catheterization, rapid inflammatory and destructive changes occur before the surgeon's attention is called to the accident by any outward phenomena.

These changes are much more serious than those which follow traumatisms in healthy urethræ, from the fact that the urine extravasated is, as a rule, highly ammoniacal and irritating, and the shock proportionately greater than in simpler cases.

Desperate as the circumstances are, patients can occasionally be snatched from impending death by the prompt performance of an external urethrotomy, or the lateral incision as for stone, and treatment appropriate to rupture of the bladder.

In approaching the treatment, however, of any given case, should false passages exist, they can in most instances be avoided by carefully studying their position and passing them by keeping the point of the instrument used constantly in contact with the opposite wall of the urethra or by employing Mercier's ingenious instrument which I now show you. The outer catheter of silver is deliberately engaged in the false passage, and then held in position, while through its eye a long soft-rubber catheter, or whalebone guide, is pushed on into the bladder. With patience and care, one of the instruments just shown can be passed in the great majority of cases. And now the query arises as to how much of the retained urine should be evacuated. The answer varies with the conditions found in any given case. If the retention occurs in an old man, whose symptoms are of recent date and whose bladder is only moderately distended, and especially if the stream flows from the catheter in full force as the bladder diminishes in size, thus showing that its muscular walls are in good condition, do not hesitate to empty it. If, however, the distension is great, the bladder reaching, as is not so very uncommon, up to or above the umbilicus, and especially if chronic retention precede, all authorities agree as to the extreme peril of such a course.

Fatal syncope or hæmorrhage is a classic sequel to the procedure, especially if the urine is drawn with the patient in a standing or sitting posture. In all such cases the rule should be to evacuate perhaps a quarter of the bladder's contents, or less; in a few hours, removal of another portion may be attempted, and by a succession of such removals the viscus emptied, and its walls, with their dilated and weakened vessels, returned to their natural state of contraction.

It is in this class of cases that the retention of a catheter is justifiable, especially if its introduction has been accompanied with unusual difficulty, or false passages exist. It should be an elastic instrument (these being tolerated by an irritable bladder much better than metallic ones), its vesical end withdrawn until its eye lies just within the bladder, and its outer end plugged. It may be fastened by tying it to the hair of the pubes, or to loops of rubber adhesive plaster fastened to the skin of the penis. If, in spite of careful and skillful attempts at catheterization, the bladder is not reached, the only resources left are to be found in the different methods of tapping or puncturing the bladder. Of these the aspirator should be first employed, though its use should be confined entirely to the relief of acute retention. An objection frequently raised to its use—that, on withdrawal of the needle, urine is allowed to escape into the surrounding tissues—need never occur if the simple precaution of keeping up the exhaustion during the withdrawal be adopted. I have had many opportunities of studying post mortem the appearance of the punctures made by this instrument in different viscera, and within a very few hours of its use, but have never seen any evidence of its injury to tissues. In fact, it has always been a difficult matter to identify the site of puncture, so rapidly is repair effected.

Having by its means gained a little time, other measures may be adopted which are calculated to give more permanent relief, such as puncture by supra-pubic or rectal methods, which should be considered in the order named (though neither finds much favor among American surgeons), or perineal cystotomy. The latter operation, which consists in opening into the prostatic urethra from the perinæum, and then either dilating or incising the neck of bladder, seems, to my own mind, to be the coming operation, both for permanent relief for those rare cases not amenable to less radical treatment, and, in cases of obscure disease, tumors, etc., for purposes of diagnosis.

A paper upon this subject appeared a few years ago in the "Lancet," in which Sir Henry Thompson stated that, out of many operations for opening the urethra from the perinæum, excluding stone cases, he had never known a fatal result. The operation has now been extensively used for mere diagnostic purposes, as a direct result of the paper just mentioned, and has within the last two years been practiced and advocated by Harrison as a legitimate method of treatment for prostatic obstruction where catheterism has failed to relieve.

Its author urges the importance of resort to the operation before the tonicity of the bladder-walls shall have been impaired, or aggravated and incurable cystitis renders its success more than problematical. His first case occurred in the person of an old man who, at eighty-two, underwent the operation, the result being rapid atrophy of the prostate and restoration of the power of micturition. Other cases have since been markedly relieved, but without the resulting atrophy gained in the first. A modification of the operation is now advocated by Mr. Harrison, which consists in doing a median cystotomy and, through the opening thus gained, divulsing or incising and removing the obstructing tissues, whether enlarged median portion, intra-urethral bar, or fibrous outgrowth, and then leaving in the wound a double elastic tube, through which thorough drainage can be maintained for a period of weeks or months.

The indication for the removal of the tube is found in the fact that micturition begins to occur through the urethra, or that a catheter can be easily passed through that canal into the bladder. This stage having been gained, the perineal tube is withdrawn and a full-sized sound passed at short intervals during the healing of the fistulous opening, which, as a rule, occurs rapidly.

The results obtained in these cases are wholly in accord with observations made in lithotomy cases, in which portions of projecting gland-tissue or fibroids have been caught by the forceps and dragged away with the calculus, showing, as far as anything can be predicated on such rough experiments, that the prostate is remarkably tolerant of interference, *provided* complete drainage exists, and room be made for the swelling consequent on congestion or inflammation of its structures.

A few words as to the general management of cases of enlarged prostate, and I have done. Three drugs are at the present time given with the belief that they exert a direct influence on the disease. I name them in the order of their value, so far as I have personally been able to judge of their effects, or ascertain the estimation in which they are held by the profession. They are ergot, iodide of potassium, and chloride of ammonium. Of the first of these I can speak in terms of confidence, since I have seen as decided effects from its use as we ever do from therapeutic agents, and in cases where no other treatment was applied. I can see why, on general principles, it should act on the muscular tissues of both bladder and gland, and I give it, accordingly, in full doses.

One of my patients, who had an immense posterior and lateral hypertrophy, and who was relieved of his first retention by the smallest catheter I own, after taking pounds of the drug for a year or two, was completely relieved of his symptoms, and that with no instrumental treatment except that necessary to empty his bladder in a few attacks of retention. Improvement of a marked character was manifest during the first three months of treatment, and I have seen the same benefit in other cases, even where cystitis of a severe grade complicated the original disease. This drug I accordingly give in most of my cases, watching my patient's general health, instructing him in the daily use of the catheter, where chronic retention exists, and also in irrigating the bladder if cystitis exists or is threatened; warning him to report any unusual appearances in his urine, watching its reaction and specific gravity, from time to time, for any indications as to treatment; impressing upon him the danger of being placed in circumstances where he can not empty his bladder at will; also that he shun cold and damp, and protect his skin by suitable flannels worn next it the year through; that he be temperate in diet and drink, and especially as to quantity and quality of the latter, even with water, tea, or coffee, making his daily consumption proportionate to his experience as to his actual need, and warning him that an excess of fluid in his bladder will not be tolerated as in youth; and, lastly, I endeavor to have him acquire regular habits as to the time of passing water, especially if he has to irrigate or artificially empty the organ. Strict observance of these rules makes the life of sufferers from even advanced prostatic disease tolerable, in many cases comfortable.

A CONTRIBUTION TO THE STUDY OF

LUPUS OF THE THROAT.*

By RAMON DE LA SOTA Y LASTRA, M. D.,

SEVILLE, SPAIN.

GENTLEMEN: I beg leave to submit to your consideration the result of my observations upon a disease the diagnosis of which is not always easy. Although I have studied manifestations of lupus in the throat with the greatest care, I have sometimes failed to recognize the lesion. The latest instance of this kind occurred to me in the summer of 1884, when my friend M. Pizarro, M. D., professor of hygiene at the medical college in Seville, came, accompanied by his own physician, to consult me about an affection of his throat. I had vaguely heard before some of my fellow-professors say that Dr. Pizarro was seriously ill, and, therefore, I was not in the least astonished to find him very much emaciated, reduced in strength, extremely gloomy, and with a clayey complexion.

He informed me that he had commenced to suffer with his throat about one year before, and that during that period he had been unable to feed himself except with milk and broth, as the swallowing of any solid food gave him a good deal of pain.

On examining his mouth, I found his tongue covered with psoriasic scales; the palatal mucous membrane tumefied, lumpy, and of a wine-red color; the right arch, tonsil, and pillars being ulcerated, the ulcer extending inferiorly to the pyriform fossa and superiorly to the middle of the uvula, and involving one half of the structure, anteriorly to within half an inch of the palatal border, and penetrating into the submucous tissue. Its borders were red and swollen; its surface was nodular, irregular, and of a hard, elastic consistence. There was some pain upon palpation, but bleeding was not occasioned. The patient felt no trouble whatever, either in talking, or while coughing, or swallowing any liquid.

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* Communicated to the American Laryngological Association, of which the author is an honorary member.

The pharyngeal mucous membrane was injected, bluish, and covered by granulations, the larynx being in its normal state with the exception of the right aryteno-epiglottic fold and the corresponding part of the inferior border of the epiglottis, which were somewhat tumefied and reddened.

The patient's voice had its normal sound and ring, and breathing took place with perfect freedom. The submaxillary glands were somewhat swollen. In his morbid history nothing of a syphilitic character could be found, nor any other malady worth mentioning, save slight manifestations of the rheumatic diathesis.

Taking into consideration these antecedents, the lingual psoriasis, the peculiar features of the affection of the throat, and that my fellow-professor was in the sixtieth year of his age, I believed that I had to deal with an ulcerated epithelioma. I expressed this belief to the physician in charge, who agreed with me both in the prognosis and as to the treatment. Nevertheless, mistrusting the information supplied by our friend, and wishing to find something to modify our judgment as to the nature of the disease, in which we could not thoroughly discover some of the symptoms of epithelioma, we resolved to apply an anti-syphilitic medication, watching its effects most carefully. Immediately after, on consultation, Dr. Pizarro commenced to take Gibert's "syrupus deuto-iodureti hydrargyri," at the same time gargling frequently with a solution of potassium chlorate. This medication produced such very prompt and bad results that it became necessary to suspend it immediately and to substitute compounds of iron, bitter tonics, and such restorative diet as the want of digestive strength and the difficulty in swallowing solid food would allow. When the organism became somewhat restored the specific treatment for syphilis was resumed; but the lesion at the palate extended so very much and took on so bad an aspect in a few days that we were compelled to give up the specific treatment, and thus we became more positive than at first in the idea we had formed of the disease.

The physician in immediate attendance upon Dr. Pizarro had to leave the city at this time, and I was then compelled to take entire charge of the patient. As it astonished me to find that this great ulcer did not produce lancinating pain, that it never bled, and that it never acquired a greater hardness now and then, I had some doubts on the subject, although I remained under the impression of having to deal with an epithelioma. From the moment I took charge of the patient I prescribed a potion containing sodium arseniate, to be taken in gradually progressive doses; gargles with a solution of resorcin; and powdered iodoform, to be applied to the ulcer after having it washed with a solution of borax. For a month the ulcer continued to extend in periphery and in depth until it had destroyed more than one half of the uvula, a great part of the soft palate, and the amygdalæ, as well as a portion of the pharynx.

When I had lost all hope, the ulcer suddenly stopped its progress, and became covered by healthy-looking granulations of good consistence; cicatrization commenced to take place, and was finally completed in three months, some irregular scars remaining, depressed in some places, prominent in others, partly discolored at intervals, red at others, soft here and hard there, the posterior being adherent to the pharyngeal wall. The lingual psoriasis still kept on. Deglutition became normal again, and my patient's restoration to health took place in a short period. It is now more than a year and a half since the occurrences narrated, and Dr. Pizarro's cure still holds good.

Reflecting upon all these facts, I became aware that my friend's disease had been a lupus, whose evolution I had witnessed without suspecting it even a single moment. But, as there is nothing to occupy the mind of a practitioner more important than an error of diagnosis, I have availed myself ever since of all the opportunities presenting to determine with the greatest possible accuracy those characters which made me doubt about the epitheliomatous nature of Dr. Pizarro's illness. I am now going to state, in the shortest possible way, what my observations and experience have taught me about lupus of the throat.

This disease makes its appearance at any period of life; as I have seen it in adults oftener than in children, I can not agree with Hebra in its being a disease peculiar to childhood. I have observed it oftener in men than in women, and, although it is to be met with in every constitution, the greatest number of those attacked who have come under my care were of a lymphatic temperament. A good many of them had suffered from scrofula, others from syphilis, a few from herpes, and some of them, like Dr. Pizarro, had been and were still subject to rheumatic manifestations. Exception made of the diathetic states just mentioned, I have been unable to ascertain anything with regard to its inheritance. If the men whom I have treated were smokers, I do not dare to attribute to tobacco any part in the causation of the disease, as there are but very few men in Spain who do not smoke. Neither have I found that hard drinkers were more liable to suffer from lupus, as I have seen very many cases in persons who would not even drink a small quantity of wine at table. I have never been able to discover that great efforts of voice, habitual exposure to an atmosphere overloaded with irritating substances, cauterization of the mucous membrane of the throat, the influence of heat or cold, or any local agencies whatever, are to be considered as especially prone to produce this disease.

I have never had the opportunity of observing the initial manifestations of lupus in the throat, but I have been able to detect the first steps in the invasion of the sound places attacked by the lupus later in the disease.

Sometimes the mucous membrane assumes a purplish color, swells up, and becomes granular, and one or two of the granulations develop so much as to reach the size of a pea, or even that of a hazel-nut. Occasionally the tubercles become prominent in the throat previous to alteration in the mucous membrane, and without differing from its normal color. They may either remain superficial, as if they were hypertrophic papillæ, or they may attack all the mucous tissues, and even penetrate down to the submucous connective tissue. Their form is rounded, the tubercle being either hemispherical, oval, flat, or conical. Their surface is smooth and brilliant, but, if several of them become intimately united, they appear as a single mass, rounded, cloven, and anfractuous. The lupous tubercle can be distinguished by its very red color from the leprous tubercle, which is opaque and of a turbid white. It is very seldom that a single tumor is observed in lupus, as is the case in carcinoma.

Generally there are several of them, either scattered or grouped, but always quite distinct. I have seen them simultaneously in the wall and in the wing of the nose, in the tongue, in the palate, and in the ventricular bands. On pressing them they present a sort of elastic resistance, which can be better felt than explained. This hardness is greater than that of inflammatory infiltrations, but it never reaches the consistence of the epitheliomatous tumor. Those parts on which the tubercles develop become rigid, for which reason their natural movements are sluggish, restrained, or entirely lost. Therefore the tongue can not conduct the food for its convenient mastication; the palate does not succeed in closing the naso-pharyngeal space during deglutition, nor does it assume a proper position for articulation; the epiglottis allows the food to get into the larynx, and the vocal cords do not vibrate sufficiently. When the tubercles develop exuberantly in the larynx, breathing becomes embarrassed and may become stridulous. Even apnœa may result. Contrary to what happens in carcinoma and in leprosy, which almost always produce, the one lancinating pains, the other a more or less complete anæsthesia, there is no alteration whatever in the sensitiveness of the parts affected with lupus. After a shorter or longer period the tubercles soften and become ulcerated. This melting down does not take place in a complete manner. In some cases only the surface of the tumor becomes fissured or excavated as a margin to simple excoriations. In others the destructive process attacks a greater or smaller portion of the tubercle in its entire depth, producing ulcers which dip out of sight in the midst of the tissues. In the former cases the affected mucous membrane appears denuded, red, smooth, purple, and granular. It is painful upon palpation. It does not bleed either upon pressure or spontaneously.

The cure is difficult and is always followed by indelible scars. In the latter instances the ulcers appear either under the aspect of deep crevices, with raised, rounded, red, hard, and perpendicularly cut borders with a narrow and smooth bed; or as heavy losses of substance which affect all the thickness of the tissues, and whose ravages neither aponeurosis, cartilage, nor bone can check; their borders are prominent, congested, and elastic, and their bed is granular, uneven, bright red, sensible to pressure, never hæmorrhagic, and always covered with a sanious and purulent secretion. This indolence and want of hæmorrhage are never found in carcinoma, nor are they observed in tuberculosis.

In some cases the ulcers are developed in a slow but fatal manner, in others they spread with astonishing rapidity, while in some others they stop in the beginning, but how far their ravages may reach it is impossible to predict. I have found them superficial and of the size of a lentil after having existed for a long time. I have seen them develop in a few days, occasioning horrible mutilations. I have observed them remain apparently perfectly quiescent during months and even years, and then suddenly and without any perceptible cause take on such destructive activity that their ravages have been quite frightful. I have watched them progressing continuously, in spite of the greatest care, to stop short at the most unexpected moment. When the healing of an ulcer is complete there remains an irregular scar, raised in some places, depressed in others; red in the former and white in the latter instance; a very retractible scar, which produces great deformities. Lupous scars differ from those originating from syphilitic ulcers in that these latter are white, radiated, and depressed. Sometimes there are preternatural adhesions of the arches to the posterior pharyngeal wall, of the uvula to the arches, of the pillars to the back of the tongue, of the cheeks to the gums. The aryteno-epiglottic folds, the ventricular bands, and the vocal cords may unite together in a greater or less extent, producing alteration of voice or aphonia, difficulty of respiration, or its complete obstruction. Cicatrization always takes place slowly, stops without any apparent reason, or is easily destroyed.

Besides the scars there remain infiltrations which determine the enlargement of the part, the corresponding mucous membrane keeps purple, bright, granular, and dry, generally with more or less desquamation of epithelial scales without any resulting excoriations.

Nevertheless, the submucosa appears uncovered occasionally, and some patients have come to me quite frightened at feeling the pain produced by the contact of the papillæ with some exciting substance, believing in consequence of it that there was about to be a repetition of their former sufferings. But, fortunately, up to the present moment I have never seen such an unpleasant result. All practitioners agree in one thing—viz., that lupus in the mucous membranes is by far more difficult to heal than the same process in the skin. This I am quite ready to acknowledge, but, without boasting about originality, I must state that in many cases I have found quite efficacious the treatment that I apply to that terrible disease, no matter whether the lupus resides on the external or on the internal integuments.

I do not despise nor condemn, as do German writers, internal medication. I prescribe iron and cod-liver oil to scrofulous patients, mercurials and iodine compounds to syphilitic ones, arsenical preparations to the herpetic, alkaline solutions to the rheumatic, and bitter tonics and invigorating medicines to those whose constitution has been impaired by any previous disease, by overwork, or by insufficiency of nourishment.

It seems to me that this general treatment has an active influence on the success of topical medication, from which we can not part, as through it we obtain undeniable success. When the lupus is not ulcerated I apply a caustic substance. Until a few months ago I have used the *tinctura iodi*, but, having obtained wonderful and rapid cures with lactic acid in the cutaneous lupus, *exedens et non exedens*, I have not hesitated to apply it to the mucous membrane of the nose, of the lips, of the cheeks, of the tongue, of the gullet, and even that of the larynx; and I can assert that I have met with no other inconvenience but the natural pain, the intensity of which has been as varied as the number of patients I have observed.

In ulcerated lupus also I sometimes make applications of the lactic acid, but more frequently I wash the affected region with a solution of borax, covering it afterward with powdered iodoform. I always prescribe gargles with a solution of resorcin (one per centum), and my patients are submitted to the strictest hygienic *régime*.

All patients who have submitted themselves to this treatment have recovered in a longer or shorter period; but

I must confess my belief that, in some instances, the cure has been realized rather in the natural evolution of the disease than by virtue of therapeutic measures.

"LARYNGEAL VERTIGO."*

By FREDERICK I. KNIGHT, M. D.,

BOSTON, MASS.

At a meeting of the Société de biologie in 1876, M. Charcot, during a discussion on a case of sudden death after thoracentesis, narrated the history of two patients in whom marked cerebral disturbance followed and seemed in some way dependent upon an attack of cough. The publication of these cases has been followed by others from Gasquet, Charcot again, Krishaber, Gray, Lefferts, McBride, Russell, and Massei. The distinguishing feature of the cases described has been that an attack of cough was immediately followed by giddiness, and also in all but two cases by momentary loss of consciousness, the patient fully recovering himself at once without any mental obscuration.

While it is the opinion of the writer that attacks of dizziness after cough are comparatively frequent, and temporary loss of consciousness probably not so rare as has been supposed, the fact remains that little attention has been accorded the subject, and it seems desirable to analyze reported cases, and record others, with the object, if possible, of explaining the mode of dependence of the cerebral symptoms upon the cough.

We have fourteen published cases on record, and these, with two which I shall add, will form the basis of my paper. I shall not weary you with any prolonged history of these cases, but simply give their essential points as far as I could obtain them.

A gentleman, forty-two years old, consulted me recently for a general bronchitis of about a year's duration. He was a man of robust physique, both his parents being still alive and well. He remembers that, when a boy, his head used to be held under the water-faucet by his father for what was called "congestion." He studied hard, and at one time in college suffered from insomnia. He lost a brother at the age of twenty-seven from inflammatory rheumatism, and had himself suffered an attack of this disease at the age of fifteen. He had been for a considerable time under great mental strain in the direction of enormous financial matters through very troublous times. He consulted me more on account of the urgency of his family physician than from any discomfort of his own, for he said that his cough at the time was not particularly troublesome; I found, on examination, his pulse to be seventy-six in the minute and regular. There were no morbid signs discoverable by auscultation of the heart. The chest, however, was filled with sonorous and sibilant râles. He was put upon the iodide of potassium, the dose of which was gradually increased from ten to thirty grains three times a day, and a laxative for the bowels. The wheezing and cough began to improve at once, but on one occasion, after a day of great worry and fatigue, he had a fit of coughing, which was followed by loss of consciousness. He did not fall down, as he was sitting in a chair at the time, and his wife, who was near, caught him in her arms. There was no evidence of spasm of the glottis, there were no convulsive movements, and he quickly recovered full consciousness. He continued to improve under treatment, which, besides the iodide, included a small dose of strychnine and the removal of a small mucous polyp from one nostril, until he was comparatively well. He never had loss of consciousness but once, but has since informed me that, judging from his own sensations, he has often come near it.

The second case which has come to my knowledge occurred in the practice of Dr. J. P. Oliver, of Boston.

The patient was a widow, forty-seven years of age, who had been subject to attacks of dizziness in connection with digestive derangements. She had a granular pharyngitis, and had been subject to winter cough for ten years. During one attack of cough she became dizzy, and then lost consciousness. There was marked congestion of face and neck at the time. She was always relieved of the cough by the local use of weak astringents. She never had loss of consciousness but once.

Most of the records of cases, having been made without reference to special investigation, are more or less deficient in points about which more accurate and fuller information would be very desirable, but such important facts as are given I will tabulate.

In the matter of sex, a curious fact strikes the eye in that all the reported cases but one have occurred in men, one female having been added to the roll by myself to-day.

The average age of the thirteen whose ages are given is forty-nine and seven thirteenths.

The cough which introduced the attack was described as slight in six cases, spasmodic or a fit of cough in two, and a severe fit of cough in three. This was said to be preceded by burning, in addition to the usual tickling, in the larynx in three cases.

Momentary loss of consciousness is stated as having occurred in fourteen cases; one patient fell, but declared he was not unconscious; and in another (McBride's) there was never loss of consciousness. Such a record as this, I feel convinced, happens because only the severe cases attracted sufficient attention to cause their publication.

Dizziness was mentioned in eleven cases, and in six it was stated as sometimes occurring after cough without any subsequent loss of consciousness. Two patients had been subject to dizziness previously without cough.

In four patients there seems to have been decided evidence of a laryngeal spasm; in one this seems doubtful. Krishaber says that in his case there was, besides the spasm of the larynx, a sudden arrest of all the muscles of respiration. Once his patient was strangled by tobacco-smoke accidentally blown into his face, and could not breathe for several seconds, suffering intensely, but he did not on this occasion lose consciousness.

There was marked congestion of the head and face in four patients, while one was said to be pale, and another very pale.

There were convulsive movements of the limbs in three cases; in one of these also of the head, and in another of the face.

It is distinctly stated in seven cases that there was no mental confusion immediately after the attack; in one the patient was said to be giddy and confused "for some little while," and in one there was said to be slight mental confusion afterward.

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* Read before the American Laryngological Association, May 27, 1886.

In six cases it is stated that the patients were personally free from other evidences of nervous disease, and in four there were such evidences. In Krishaber's case the first loss of consciousness occurred from sudden emotion, and was not preceded by cough. Subsequent attacks, even though caused by emotion, were preceded by cough. In McBride's case there was a tendency to spasm, exaggerated tendon reflex, ankle clonus, spasmodic action of palate muscles, and stricture of the gullet. Gray's patient had been subject, seventeen years before, after a scalp-wound by a bullet, to losses of consciousness like the present, but without cough, which continued for two months. Russell's patient was stated to be of a decidedly nervous constitution.

In regard to other evidence of disease, five patients are stated to have had chronic bronchitis, three to have had simply a cough, two had gout or rheumatism, one had syphilis, one had diabetes, and one probably had catarrhal pneumonia.

In none of the attacks was there any biting of the tongue, frothing at the mouth, or involuntary micturition.

Local examination showed hyperæmia of the larynx in six cases, granular pharynx in four, and was negative in two cases.

The record shows that in seven cases treatment relieved the patient, temporarily at least, of the symptoms under discussion. The most common forms of treatment were by astringents to the pharynx, counter-irritation over the larynx, and the administration of bromides internally.

I have announced the subject of my paper as "Laryngeal Vertigo" because Charcot has called attention to his cases under this name, and because, while I believe it to be an entirely erroneous designation, other names which have been proposed are also open to the objection that the nature of the affection is unwarrantably assumed by using them. Krishaber reports his case, for instance, under the title "Spasm of the Glottis in the Adult." Gray designates the affection "Laryngeal Epilepsy," while McBride strengthens Krishaber's definition by calling it "Complete Spasm of the Glottis in the Adult."

Now, in the first place, it is necessary for us to consider if there is evidence in the cases reported of what can properly be called vertigo. I think not. If any one of my hearers has seen, or had described, or will get a patient with aural vertigo to describe an attack to him, I believe he will agree with me. Let us see what the usual train of symptoms in Ménière's disease is. First a tinnitus aurium, then the surrounding objects begin to revolve round and round, or over and over, or the patient feels as if going round himself; he reels if walking, and finally may fall, but seldom becomes unconscious, and ends with an attack of nausea and vomiting. A reflex aural vertigo presents much the same course, only tinnitus aurium is not so commonly a precursor. I think, from a comparison of this statement with the history of our cases, it will be evident that they do not present what can properly be called a vertigo, but simply a giddiness, or, as it is sometimes called, a lightness of the head, a mild degree of which nearly every one has felt after coughing or making prolonged expiratory effort of any kind. If it were a real vertigo, a serious disturbance of equilibration, an easy explanation of its occurrence would be to place it in the same category as the stomachic vertigo; in fact, an aural reflex, brought about by the connection of the pneumogastric with the labyrinth through the sympathetic.

Let us consider for a moment now the question of epilepsy. It is evident that none of the cases presented the severe form of this disease. There was no biting of the tongue, no frothing at the mouth, no involuntary micturition, and no mental impairment afterward.

May we class the attack, as Gray would have us, as one of "le petit mal"? If, as Gray suggests, we use the term epilepsy in its more catholic sense (as Hughlings Jackson employs it) when speaking of all sudden actions of nerve-cells, then we could not exclude from this category any case of temporary loss of consciousness, no matter what intermediate mechanism there might be, and such decidedly neurotic cases as Gray's and Krishaber's might well be here placed. It will be remembered that Gray's patient had similar attacks, years before, after a scalp wound, and that Krishaber's patient had his first attack of loss of consciousness after sudden emotion, without any previous cough.

The fact of loss of consciousness, however, does not compel us to consider a case epileptic, for asphyxia and syncope may produce temporary unconsciousness. Neither does the fact that there were convulsive movements of limbs in three cases make them epileptic, for convulsions are by no means rare in the laryngismus and whooping-cough of children. There is no doubt about the possibility of the production of "reflex epilepsy" by a pediculated polyp in the larynx, as shown by Sommerbrodt's case.* This patient had, without doubt, genuine epileptic attacks with all the characteristic symptoms and results, which disappeared at once after the removal of the polyp. The same patient, fifteen years before, had a short series of epileptic attacks, which were attributed to a cicatrix in the dorsal surface of the right hand, and which disappeared after the excision of the cicatrix. Other similar cases are well known.

The question for us, however, is whether such an explanation is necessary for cases of loss of consciousness following cough. While I do not deny that mild epileptic attacks *may* originate from slight sources of irritation in the larynx, it seems to me that we have more reasonable explanation in other ways.

Our profession has long been familiar with loss of consciousness in sudden spasm of the glottis, notably in cases of foreign body in the larynx, but also in children with laryngismus and whooping-cough.

Let us, then, look at the possible mechanism of dizziness and loss of consciousness through the agency of spasm of the glottis. Proof of the occurrence of spasm of the glottis, however, is given in but few of our cases. The best presentation of this theory has been given by McBride.

McBride assumes that in every case the attack was "preceded by a short cough, or, in other words, by a series of spasmodic inspirations, followed by spasmodic expiration with partially closed glottis." *

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* "Berl. klin. Woch.," September 25, 1876.

McBride believes the attack to be due to the physical condition within the thoracic cavity caused by a complete spasm of the glottis occurring just after a full inspiration. He gives sphygmographic tracings showing the effect on the pulse of taking a deep inspiration, and then attempting to perform the expiratory act with the glottis closed. The result is an almost complete obliteration of the pulse tracing, and one of the gentlemen experimented upon experienced a momentary threatening of syncope just after one of the tracings was taken. McBride says that the increased atmospheric pressure on the walls of the alveoli will in all probability prevent, or tend to prevent, the free passage of blood through the lungs, and therefore lessen the blood in the left side of the heart, and the pressure on the large intra-thoracic veins must hinder the return of venous blood, and thus we can understand that the face will be pale or turgid, according as the spasm of the glottis lasts for a longer or shorter time. He says it is also quite conceivable that the compression of the heart between the unyielding lungs and the chest-wall may help to paralyze its action. The possibility of the compression of the pneumogastric in certain cases, and thus inhibition of the heart's action, will also occur to us, and recalls to mind the ease with which Czermak was said to stop the action of his heart at will by pressing his pneumogastric against an osseous tumor of the neck.

McBride quotes from the very interesting article of Weber † to substantiate his theory. Weber points out that forced expiration with closed glottis causes weakening, and eventually stoppage, of the heart's action. He shows by experiments that if severe pressure be exercised, even by the expiratory muscles alone, the pulse, because the supply of blood to the heart through the venæ cavæ is cut off, immediately becomes small, but continues until the blood contained in the thorax has emptied itself through the left side of the heart into the aorta. Then, usually after three to five beats, the pulse stops altogether, because no blood reaches the aorta from the empty heart, and only returns after the compression of the thorax has ceased. On one occasion Weber, while experimenting on himself, produced actual syncope. During the interval of unconsciousness slight convulsive twitchings of the face were noticed by the bystanders, and, as consciousness returned, all recollection of what had taken place was so obliterated that, in spite of the fact that his pulse was being counted aloud as before, he could not at first remember where he was and what was happening.

Blowing on certain wind instruments is a similar procedure, and this, as is well known, often produces very uncomfortable sensations in the head.

Now, inasmuch as conclusive evidence of spasm of the glottis is absent in the majority of cases reported, it becomes us to consider whether such spasm is really necessary for the production of the symptoms under consideration. I believe sufficient disturbance of the cerebral circulation can be produced by the forced expiration of cough, or by rapid respiration, to cause dizziness, or even momentary loss of consciousness. I referred to this latter idea in the discussion of Dr. Lefferts's paper, read before this association three years ago. Who that practices auscultation has not had patients become dizzy when they were made to keep up forced respiration a little too long?

In recent years we have been made familiar with the production of analgesia—*i. e.*, the deprivation of the sense of pain, without loss of the sense of touch or feeling, by rapid breathing of atmospheric air, through the writings of Dr. Bonwill and others, of this city. Dr. Hewson first called attention to this method of producing insensibility to pain for minor surgical operations under the name of Bonwill's method of inducing anæsthesia,* and Bonwill himself, later, tried to explain this mode of producing insensibility to pain.† As one cause he assigns the retention of carbonic acid in the blood, and quotes the well-known results of experiment: that the percentage of carbonic acid exhaled diminishes as the rate of respiration is increased, and infers from this that there is a retention of carbonic acid in the blood, and consequent asphyxia. This assumption is unjustifiable, as experiment has fully shown that, while the percentage of carbonic acid is diminished as the rate of respiration is increased, the total amount of carbonic acid is steadily increased. Whether so much more is generated by rapid respiration that, notwithstanding increased elimination, there still remains an abnormal amount in the blood, we do not know. Speck was unable to establish the fact, with increased absorption of oxygen under increased pressure, either of an increased oxidation on increased temperature, or an increased formation and expiration of carbonic acid. ‡

It is possible that the dizziness and other cerebral symptoms of rapid respiration are due, if in any way connected with the interchange of gases, to oxygen intoxication.

It seems, however, fair to assume that an excess of that condition, whatever it may be, which causes the peculiar sensations in the head of any one after forced breathing, and frequently after hard cough, may cause momentary unconsciousness.

To recapitulate. It is admitted that we have uncomfortable sensations in the head, and sometimes loss of consciousness following cough. The simplest explanation of the symptoms would seem to be that there is a direct disturbance of the cerebral circulation by compression of the large blood-vessels, and even of the heart itself.

The mechanism of this is easily understood when there is forced expiration against a glottis closed by spasm. With cough there is a repeated forced expiratory effort against an intermittently closed glottis, but, even without this, we know that there is sufficient disturbance of the cerebrum through greatly increased rate of breathing to cause very uncomfortable sensations in the head, and to produce momentary insensibility to pain.

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* As I have before stated, Krishaber's patient had his first attack without precedent cough, which may place this one attack at least in a different category.

† "Ueber ein Verfahren den Kreislauf des Blutes und die Function des Herzens willkürlich zu unterbrechen." Müller's "Archiv," 1851, p. 88.

* "Philadelphia Medical Times," March 4, 1876.

† "Philadelphia Medical Times," July 17, 1880.

‡ Hassall, "The Inhalation Treatment of Diseases of the Organs of Respiration," London, 1885.

In order to explain why one person should experience such disturbances from cough, and another not, is difficult, and we are obliged to resort to the old theory of idiosyncrasy. The fact that some of the patients had lost consciousness before, without cough, allows us to suppose that in case of predisposition to such condition the mode of excitation may be different in different attacks; that the tendency to lose consciousness may be acted upon in very different ways, just as a patient who is liable to syncope may faint from a variety of causes, *e. g.*, exposure to bad air, loss of blood, or simple emotion.

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ON THE PHYSIOLOGICAL AND THERAPEUTICAL PROPERTIES OF THAPSIA PLASTER.

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THE resin which forms the base of this plaster (sparadrap révulsif au thapsia [French Codex]) is obtained from the root of the *Thapsia garganica*. It is described as an "umbelliferous, perennial herb," growing in southern Europe and northern Africa, in countries bordering on the Mediterranean Sea. The thapsia of commerce is obtained almost exclusively from the French colony of Algeria. The medicinal properties of the plant were well known to the ancients, and, according to Galen, Dioscorides, and other old writers, it was employed internally as an emetic and purge and externally as a counter-irritant for rheumatic pains, to lessen dyspnœa, etc. Its use seems to have declined, however, until about 1868, when it was revived in France. The plaster prepared from it is composed of 7 per cent. of the resin, combined with yellow wax, colophony, and turpentine (French Codex). As far as can be judged from the meager references to it in medical literature, the plaster seems to have met with varying fortunes in French therapeutics, being highly prized by some practitioners and condemned by others as being too severe and even dangerous in its action. The French plaster is kept in stock by a number of druggists in this city, but its use, so far as I can learn, is limited chiefly to the French population, and, indeed, it seems to be but little known by the profession at large.

Reference is made to thapsia in the last editions of the United States and National "Dispensatories"; but, with these exceptions, it is not mentioned in any modern work on materia medica and therapeutics which I have examined. It is given a passing notice or two in the drug journals of several years back, but I have been unable to find anywhere in literature a comprehensive description of the physiological properties and therapeutical applications of the plaster. The following account, therefore, of its action and uses is based entirely upon my own experience with it. The French plaster appears in the form of rolls or cylinders, and is of an orange-yellow color. The rolls are eight inches in width and about a yard in length, and, I am told, are sold to the trade for about fifty cents each. This is by no means expensive, as a roll will make from eighteen to twenty plasters of the average size for application—viz., four by four inches. It is very cleanly in its application, leaving but little residue on the surface when removed. The heat of the hand and body is sufficient to make it adhere. A vigorous friction of the surface with a spirituous solution before laying on the plaster will greatly augment its activity. In a period varying from five to ten hours after its application considerable itching of the part supervenes, and, if the edge of the plaster is everted, the skin beneath will be found of a uniformly scarlet hue. It should be removed as soon as the irritation becomes sufficient to render it annoying. In many cases I have found that it could be well borne for twenty-four hours; but, as will be seen, it is not always safe to advise so long an application. Within from twenty-four to thirty-six hours it will be found that the area of efflorescence has extended considerably beyond the limits of the plaster, and that the eruption is assuming the form of a punctate or miliary rash, thickly scattered over the surface. In some cases the centers of the papules are occupied by minute vesicles, which may proceed to pustulation. The local redness and irritation continue for about four days, and then begin to decline. If vesicles have been formed, they dry up and disappear speedily, though a purplish-red discoloration of the skin may persist for several weeks. The eruption is not unlike that produced by croton-oil; but I have never observed umbilication of the thapsia vesicles, nor in any case have cicatrices remained after their disappearance.

There are two principal objections to the use of the thapsia plaster: 1. The remarkable tendency of the eruption to spread, making it difficult to confine the sphere of its action within desired limits. 2. The occasional severe and painful character of its local action. These drawbacks may be partially overcome by prescribing a piece of the plaster much smaller than the surface desired to be acted upon, and, if it is a first application, by counseling the patient to remove it within six hours. Of course, if the plaster is being used on a patient for the second or third time, and he has been found to possess no idiosyncrasy to its action, it may be allowed to remain much longer. It is my belief that a tolerance is acquired for thapsia after repeated use. This has certainly been the case in my own person; in three experimental applications of the plaster the irritation progressively diminished with each application. Patients have also informed me that it did not seem to "draw so well" after using it two or three times. In every case I have seen in which the plaster produced unpleasant effects, it had been allowed to remain *in situ* from eighteen to twenty-six hours. If the irritation produced by the plaster is unusually severe, an inunction of olive-oil, or glycerin and rose-water, or simply pulverized starch, will usually give relief. Patients should be cautioned to wash the hands after handling the plaster, as the resin may be conveyed to other parts in this way; I have several times observed an erythema of the face produced by it, and in one case a mild conjunctivitis was developed.

The therapeutical properties of the plaster can be shown by presenting sketches of a few illustrative cases. My attention was first called to it, in the autumn of 1885, by a patient at the Clinic for Diseases of the Chest at the Post-graduate Medical School. The patient, a man, aged thirty-four, had been treated at the school several months before at the clinic of Dr. William H. Porter. He informed me that he had suffered for several years with lumbago, and was rarely free from pain in the lumbar region and stiffness of his back. He had used various liniments and plasters with very little relief. On applying at the dispensary before, Dr. Porter had prescribed a plaster which had caused considerable irritation, and had brought out a profuse rash. It had given the patient immediate and marked relief, and he had had no return of the lumbago until a few days before his appearance at the Clinic for Diseases of the Chest, when he had taken cold from undue exposure. Since then he had had a mild attack of bronchitis, and had felt a gradual return of the lumbar pains. On his own recommendation, I prescribed a renewal of the plaster without any internal treatment. The patient returned to the clinic within three days with the information that the plaster had again been successful. According to his statement, the pain and stiffness had completely disappeared since the application of the plaster. This relief remained while the patient was under observation—a period of about two weeks. Since treating this case I have prescribed thapsia plaster many times, chiefly in dispensary practice, and have carefully watched its effects. An account of some of these cases is subjoined.

Case I.—I. F., laborer, aged sixty, applied at the Post-graduate School for treatment January 26, 1886. He had severe intercostal neuralgia of long standing, which had failed to yield to various applications which had been made. A thapsia plaster was ordered to be applied over the seat of the pain after a thorough friction with spirits of camphor. The patient returned to the clinic after two days and said that the plaster had given him great relief within twenty-four hours after its application. It brought out an abundant rash, but the irritation was not severe. This patient was not seen again, hence it can not be stated how long the relief lasted or whether it was permanent.

Case II.—J. F., aged twenty-six, applied at the Post-graduate School for treatment February 25, 1886. He was hypochondriacal, somewhat debilitated, and complained of an indefinable sense of weakness and distress in the muscles of the left lumbar and dorsal regions. This had troubled him a long time, but he had used nothing for it but friction, which usually gave him temporary relief. The muscles in this region were found to be somewhat tender on pressure, but no other abnormal conditions could be detected. Tonics were ordered internally with thapsia plaster locally. The patient applied the plaster at bedtime on the evening of February 25th, but removed it after three hours and a half, as it gave rise to considerable itching and prevented him from sleeping. Notwithstanding the brief application, the characteristic rash produced by the plaster was found to be well developed on the 27th, when the patient returned to the clinic. He expressed almost entire relief from the painful sensations in the muscles. He continued to improve for ten days, when he disappeared from observation.

Case III.—J. McH., a man, aged thirty-five, came under treatment at the Post-graduate School February 25, 1886. He had intense pains and stiffness in the muscles of the right axillary region, which had persisted for seven or eight weeks in spite of several patent plasters which had been applied. A thapsia plaster was applied over the muscles. The patient was entirely relieved within two days. He was last seen early in May; up to that time there had been no evidence of a return of his trouble.

Case IV.—A. D., a man, aged thirty-five, applied May 1, 1886, for treatment for chronic bronchitis. He had a constant, irritative cough, with a sensation of heaviness and oppression across his chest. There was considerable debility. Tonics were ordered internally, and a thapsia plaster to be applied across the front of his chest; no cough mixture.

May 4th.—The patient applied the thapsia plaster Saturday afternoon, May 1st, and allowed it to remain forty-eight hours, as it did not cause great irritation. To-day (Tuesday) the characteristic rash and local redness are present to a marked degree, but there is no vesication or pustulation. The patient states that the irritative cough is greatly relieved. During Sunday he coughed but once or twice. The sensation of heaviness and oppression is gone. He is highly pleased with the effects of the plaster.

Case V.—B. K., aged twenty-three, a patient of the Outdoor Department of Bellevue Hospital, came under treatment May 27, 1886. The patient says that he was seized about three weeks ago with a severe, sharp pain in the lower part of the left side (left infra-axillary and infra-scapular regions). The pain seemed to have grown in intensity, and he now found it impossible to draw a deep breath without great anguish. He had a constant dry cough. On physical examination, the signs of pleurisy with an effusion of about two inches were discovered in the left side. The patient had resorted to liniments, and had worn a belladonna plaster for the pain, but the relief had been very slight. Syr. ferri iodid. internally was ordered, and a thapsia plaster over the seat of pain.

May 29th.—The patient applied the plaster and allowed it to remain twenty-five hours. The characteristic eruption is present. He says the pain has completely disappeared from its original site, but he still has a sensation of soreness in the upper part of the left side, which is very slight, however, and does not interfere with deep inspirations. There had been no return of the pain when the patient was last seen, June 3d.

If proper care is not used, the thapsia plaster will sometimes relieve one condition by replacing it with a worse one. A case in point will exemplify this fact:

J. C., unmarried, female, aged twenty-five, applied for treatment February 18, 1886. She complained of severe soreness and tension in the muscles of the right scapular region, which had persisted for several months and had resisted treatment. Use of the right arm had been seriously modified by the trouble. A thapsia plaster was ordered to be applied over the muscles. Two days after (Saturday) the patient wrote me a note (which I did not receive until Monday) asking me to call at her home, as the plaster was acting with great severity. She was well enough to return to the clinic, however, by Tuesday. She then informed me that she had allowed the plaster to remain on eighteen hours. It had produced such intense irritation as to prevent sleep for two nights. Her entire back was covered by the eruption, and the vesicles had become confluent, in places forming pustules of considerable size. The sensation of stiffness and tension in the muscles, however, had disappeared. It seemed to me as if it was merely masked by the irritation of the eruption. The patient made a good recovery within a few days, both from the eruption and from the original scapulodynia, but the effects of the plaster could hardly be termed satisfactory in this case.

At rare intervals the plaster will produce unhappy results, both upon the mind of the patient and upon the course of the affection for which it is applied, as shown by the following cases:

Case I.—Miss S., a young lady aged twenty, applied to me for treatment February 22, 1886. She had acute pains and great stiffness in the muscles of the left axillary and dorsal regions, due to a severe strain two days previously. I prescribed a thapsia plaster, which was applied at once and allowed to remain twenty-four hours. At the end of that time a heavy rash had appeared, but the pain of the muscles was not mitigated. Numerous vesicles were formed which coalesced, giving rise to considerable blisters. At the end of seventy-two hours the pain and rigidity of the muscles seemed to be intensified, and the irritation of the plaster had been so great as to interfere with sleep. The patient recovered within a week, first from the original trouble and afterward from the effects of the plaster, but was by no means prepossessed in favor of thapsia.

Case II.—S. F., a Russian peddler, aged thirty-four, came under observation May 29, 1886. The patient had suffered a long time with a dull, heavy pain, and great soreness and rigidity in the muscles of the back below the scapula on either side. He had used many remedies without relief. I ordered a thapsia plaster to be applied to the seat of the trouble.

June 1st (Tuesday).—The patient applied the thapsia on Saturday last after having the surface vigorously rubbed with spirits of camphor. He allowed it to remain twenty-five hours, notwithstanding the fact that it produced intense pruritus and prevented him from sleeping. An examination showed that the plaster had acted with extraordinary energy. Although the piece applied was only four inches long by four wide, the entire dorsal aspect of the trunk was found to be covered with the eruption. The miliary papules could be seen as high up as the occiput and as low as the coccyx. The skin was intensely reddened and inflamed. The eruption had caused the patient great distress, and had prevented him from continuing his occupation. An inunction of sweet oil was ordered.

5th.—The irritation produced by the thapsia has subsided and the vesicles are scabbing. The primary trouble, however, is not at all ameliorated. The patient thinks it is worse than before. There had been no relief of the muscular trouble whatever when the patient was last seen, so that the treatment in this case may be regarded as worse than a failure.

I have seen other cases in which the plaster did much more than was expected or required of it, but in no case has it acted so severely as in that of the last-mentioned patient, who undoubtedly possessed an abnormal susceptibility to cutaneous irritants.

After a somewhat extended observation of the action and effects of the thapsia plaster, I am inclined to regard it as a valuable therapeutic agent in properly selected cases. I would recommend its use especially in muscular and rheumatic pains of long standing in which other remedies have failed to give relief. I have had but little success with it in acute troubles of this nature. It has also seemed to me to be a useful application to the chest in the irritation and painful coughs of phthisis and chronic bronchitis, especially when accompanied by difficulty of breathing. In cases of simple cardiac palpitation of neurotic origin, the importance of which is often enhanced by the imagination of the patient, a small piece of the plaster applied to the *opposite* side of the chest will often act advantageously by withdrawing the patient's attention from the heart. On theoretical grounds, the plaster should act beneficially in promoting the absorption of pleuritic fluid and in favoring resolution in phthisis, but I am not prepared to speak of its action in this direction. Dr. Porter has employed the plaster for a number of years past and has extended its application to a much wider field than I have. He informs me that he holds it in high estimation. The irritating properties of thapsia rather disqualify it for use in children.

Regarding its mode of action, thapsia may be classed among the most vigorous counter-irritants or derivatives. Its influence is undoubtedly chiefly exerted by the active determination of blood which it excites from the deeper structures to the surface. Its effects may also be partially produced, in common with those of other counter-irritants, through the trophic nerves, the *methodus medendi* of which does not seem to be fully understood as yet.

Note.—Since the foregoing was written, I have received from Dr. William H. Porter a communication, dated June 26, 1886, in which he says:

"You asked me some time since to give you my opinion and experience in the use of the thapsia plasters. In reply, let me say that I have been using them for the past ten years, and have applied them in hundreds of instances, first using them as a counter-irritant in cases of phthisis, when they have often been of great service, acting, as they do, as a steady and continuous irritant. In acute pleurisy they are often of great benefit. One case in particular comes to mind, that of a physician who had suffered severely in the past with pleurisy, and was again threatened with an attack. Physical examination revealed the fine, grazing friction sound common in the first stage of a dry pleurisy. The application of a thapsia plaster to the chest, over the site of the inflammation, caused a total disappearance of all the rational and physical signs within forty-eight hours. In acute and chronic lumbago, and in all forms of rheumatic and neuralgic pains, especially those located in the muscles, a thapsia plaster will, in the majority of instances, give complete relief. It should be remembered, however, that the plaster of the American makers often proves inert and sadly disappointing. It is only the imported, of French make, that can be relied upon. One thing should always be remembered in their use, and that is, careful cleansing of the hands after handling them, otherwise the application of the hands to the face may, and often does, result in an acute facial erythema, with œdematous swelling, which closely simulates a facial erysipelas. This inflammatory condition, however, subsides in a day or two without treatment, and is not dangerous, although it may temporarily frighten the patient."

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DISLOCATION OF THE HUMERUS FROM MUSCULAR VIOLENCE, WITH METHOD OF REDUCTION.

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About the middle of last May I was called to see an Irish laboring woman, who, while climbing a step-ladder, carrying a pail of water in her right hand, lost her balance and threw out her left arm violently. She did not fall or strike anything, but felt something snap in her shoulder, followed by pain and disability of the arm. I arrived about ten minutes after the accident and found a distinct subcoracoid dislocation of the humerus. The patient was suffering considerable pain, and was thoroughly frightened. At the suggestion of Dr. P. E. Tieman, who accompanied me, I tried a method of reduction described by Dr. Neil McLeod in the "British Medical Journal" for January 30, 1886. The patient was placed on her back, with the left arm extended at right angles to the body. Pain was immediately eased in this position, and, by a moderate traction on the arm, while Dr. Tieman made counter-extension with his arms about the patient's waist, the bone was reduced with an audible snap. The patient said that she experienced very little pain, but felt the bone slip into place. The joint was then fixed in the usual manner. There was slight pain for two days, but none afterward. Passive motion was commenced at the end of a week, and the patient was allowed to resume work after a month. At present she is suffering no pain or discomfort in the joint. She stated that she had never before had a dislocation of the joint.

The method of reduction employed is based on the relaxation of the entire muscular system as well as of the muscles about the joint. Unless the entire muscular system is relaxed, complete relaxation of any portion can not be obtained. Anæsthetics being excluded, this general muscular relaxation may be best secured by placing the patient in a recumbent posture. In the common forms of this dislocation, subglenoid and subcoracoid, the pectoralis major and latissimus dorsi have their origins and insertions approximated by the displacement, and are thus, immediately after the accident, relaxed, while the remaining muscles about the joint, except the teres major and minor, are, if not lacerated, in a state of tension. By placing the arm at right angles to the body, the deltoid and supra-spinatus have their origins and insertions approximated as nearly as possible and their tension lessened. Pain is also relieved by this position to a greater degree than by any other, and the spasmodic contraction of the muscles dependent on it lessened. From these considerations it would appear that traction on the arm directly outward at right angles to the body, the patient lying on his back, would tend to reduce the dislocation with the least amount of resistance from the muscles, as none of those relaxed would be stretched beyond their normal limits, while the tension on the other muscles would be diminished as soon as the head of the bone began to move outward.

Dr. McLeod quotes two cases treated in this manner, one subcoracoid, one rather subglenoid than subcoracoid, but not typically either. In both cases reduction was accomplished easily without pain. In one case neither the patient nor the surgeon knew when reduction took place. In the "British Medical Journal" for May 22, 1886, two other cases are mentioned, both successful and without pain, in one of which the patient was not aware when reduction took place, the amount of traction being about two pounds.

This method of reduction, although not new, as stated by Dr. McLeod, is not, I think, well known. It is not described in any of the surgical treatises to which I have had access, with the exception of Dr. Hamilton's work on "Fractures and Dislocations." I am convinced, however, that it is used to a considerable extent among surgeons, though many if not most general practitioners are accustomed to employ Cooper's method, with the heel in the axilla, although this is very painful and is frequently followed by more or less prolonged pain and disability of the joint. In many recent cases the pain and dangers of Cooper's method may be avoided, without resort to the complicated movements of reduction by manipulation, by the method here indicated. If it fails in any case, nothing has been done prejudicial to the application of any other method of reduction.

Book Notices.

A Hand-book on the Diseases of the Nervous System. By James Ross, M. D., F. R. C. P., LL. D., Senior Assistant Physician to the Manchester Royal Infirmary, etc. Philadelphia: Lea Brothers & Co., 1885. Octavo, 726 pages, 184 Illustrations. [Cloth, $4.50; leather, $5.50.]

The author's larger work on nervous affections is already well known to the profession. In the present work he has endeavored to give what he considers to be a concise statement of the truths of neuro-pathology. There is but one fault in Dr. Ross's method of writing—a disposition to divide and subdivide, until one would really imagine that the author would find difficulty in extricating himself from the intricacies of his classifications. It is quite as serious a fault to tell a beginner in a special department of science too much as too little. This applies with special force to any work purporting to give the outlines of such a subject as neurology—a discipline which, even in its most simple statement, presents much difficulty. When we make this criticism of Dr. Ross's work, however, we have said our worst; in every other respect the book before us is entitled to the highest consideration; it is painstaking, scientific, and exceedingly comprehensive for a work of its class. The advanced student and practitioner may read it with profit.

Manual of the Antiseptic Treatment of Wounds, for Students and Practitioners. By W. Watson Cheyne, M. B., F. R. C. S., Assistant Surgeon to King's College Hospital, etc. With Illustrations. New York: J. H. Vail & Co., 1885. Pp. xiii-151.

The proper management of wounds is a problem that is continually presenting itself to every physician and surgeon, and, although much has been written upon this subject, there is still a want of a practical work upon antiseptic surgery.

The small volume before us considers this subject in nine chapters. The first treats of the process of repair in wounds and the dangers to which they are liable. The second deals with bacteria and disease, and contains an account of the different kinds of germs found in wounds, their origin, life-history, and connection with inflammation and suppuration. In Chapter

III are considered the methods of destroying bacteria, the germicidal power of different antiseptics, and the varying resisting power of certain spores to the action of disinfectants. In Chapter IV is given an account of the various materials used in antiseptic surgery, their preparation, methods of keeping, etc. Chapter V is devoted to the technique of antiseptic surgery, the method of performing an operation, the use of ligatures and sutures, drainage and strapping, and dressing the wound. In Chapter VI special dressings are considered, such as the method of applying antiseptic coverings to the head, breast, etc. Chapter VII treats of the modification of antiseptic surgery as applicable to patients living at a distance. In Chapter VIII is considered the use of other substances than carbolic acid, such as thymol, bichloride of mercury, iodoform, etc. Chapter IX is devoted to a general consideration of disinfectants in the treatment of wounds—free drainage, irrigation and immersion, etc.

The volume is certainly an excellent one, and comprises in a small compass all the information that is necessary for performing and conducting an operation to its final issue. It is eminently practical, and can be cordially recommended as a great addition to the literature on the subject of antiseptic surgery.

BOOKS AND PAMPHLETS RECEIVED.

Lehrbuch der Physiologie für akademische Vorlesungen und zum Selbstudium. Begründet von Rud. Wagner, fortgeführt von Otto Funke, neu herausgegeben von Dr. A. Gruenhagen, Professor der medizin. Physik an der Universität zu Königsberg i/ Pr. Siebente, neu bearbeitete Auflage. Mit etwa Zweihundertundfünfzig in den Text eingedruckten Holzschnitten. Zehnte Lieferung. Hamburg u. Leipzig: Leopold Voss, 1886. Pp. 81 to 240, inclusive.

A Manual of Dietetics. By J. Milner Fothergill, M. D. Edin., Physician to the City of London Hospital for Diseases of the Chest, etc. New York: William Wood & Co., 1886. Pp. viii–1 to 255. [Price, $2.50.]

A Manual of Surgery. In Treatises by Various Authors. In three volumes, edited by Frederick Treves, F. R. C. S., Surgeon to and Lecturer on Anatomy at the London Hospital. Vol. I, General Surgical Affections, The Blood-vessels, The Nerves, The Skin. Vol. II, The Thorax, The Organs of Digestion, The Genito-Urinary Organs. Vol. III, The Organs of Locomotion and of Special Sense, The Respiratory Passages, The Head, The Spine. Duodecimos, 1866 pages, 213 engravings. Philadelphia: Lea Brothers & Co., 1886. [Price, cloth, $2 a volume.]

The International Encyclopædia of Surgery. A Systematic Treatise on the Theory and Practice of Surgery by Authors of various Nations. Edited by John Ashhurst, Jr., M. D., Professor of Clinical Surgery in the University of Pennsylvania. Illustrated with Chromo-lithographs and Wood-cuts. In six volumes. Vol. VI. New York: William Wood & Co., 1886. Pp. xlviii–1272.

Illustrations of Unconscious Memory in Disease, including a Theory of Alteratives. By Charles Creighton, M. D. New York: J. H. Vail & Co., 1886. Pp. xvi–212.

Is Disease of the Uterine Appendages as frequent as it has been represented? By Henry C. Coe, M. D., M. R. C. S., etc. [Reprinted from the American Journal of Obstetrics and Diseases of Women and Children.]

The Unity or Duality of Syphilis historically considered. By J. L. Milton, Senior Surgeon to St. John's Hospital for Diseases of the Skin, Edinburgh.

The Genu-pectoral Posture—its Value in Impeded Uterine Reduction and in the Prolonged Nausea and Vomiting of Pregnancy. By Henry F. Campbell, M. D., Augusta, Georgia. [Reprinted from Vol. X, "Gynecological Transactions," 1885.]

THE
NEW YORK MEDICAL JOURNAL,
A Weekly Review of Medicine.
Pubished by D. Appleton & Co.
Edited by Frank P. Foster, M. D.

NEW YORK, SATURDAY, JULY 10, 1886.

THE ANTWERP CONGRESS OF PSYCHIATRY AND NEUROLOGY.

We have received a copy of certain preambles and resolutions, signed by Dr. Frank H. Hamilton, Dr. William M. McLaury, Dr. George W. Wells, and Dr. Jean F. Chauveau, that were passed by the Society of Medical Jurisprudence and State Medicine, of New York, on the 8th of April. The burden of the document is that Mr. Clark Bell has announced himself as the American delegate to the Antwerp congress, which is expected to take action in the matter of classifying mental diseases; that, so far as the eminent neurologists who belong to the society have been able to learn, no body of specialists engaged in the study of nervous diseases has any knowledge of the reasons for Mr. Bell's appointment, or of the representations on which it was obtained; that it is highly desirable that American psychiatry should be worthily represented at the congress; that Mr. Bell is not an alienist, nor even a physician; that the congress be respectfully requested to duly weigh these considerations; and that such bodies as the American Neurological Society and the New England Medico-psychological Society might safely be depended upon to select worthy representatives in the important undertaking of classifying psychical disorders. The resolutions further recite that the classification of mental diseases, however interesting it may be to both lawyers and physicians, is pre-eminently and exclusively a question of medical science, but that Mr. Bell, a lawyer, is the only representative of America on this occasion.

We may take it for granted that nothing but weighty reasons would have moved the Society of Medical Jurisprudence and State Medicine to pass such pointed resolutions bearing upon the course and qualifications of an individual, and it must be admitted that such reasons are abundantly made manifest by the statements embodied in the preambles and resolutions. Conspicuous as Mr. Bell has been in the affairs of the Medico-legal Society and as the editor of the "Medico-legal Journal," probably his selection as one of a number of delegates would not have called forth any noteworthy complaint, but that he alone should stand for the whole of North America in such a matter must be exceedingly unsatisfactory to our alienists. The point as to his credentials is of minor moment, for whoever takes part in such a work generally represents himself and nobody else, and this is commonly understood. The society, and with it our alienists as a body, may therefore draw the consolation that the part taken by Mr. Bell in the proceedings at Antwerp is in no wise likely to be construed as expressing the convictions or the sentiments of anybody but Mr. Clark Bell. This, of course, does not make amends for the absence of a competent American representative, and we think that the society is quite warranted in looking upon the extraordinary and anomalous state of things set forth in the preambles and resolutions as a grievance.

AN OLD NOTION OF MORBIFIC GERMS.

Dr. Humbert Mollière, of Lyons, has written an octavo volume of rather more than one hundred and fifty pages, in which he gives a sketch of a M. Goiffon, a Lyonnese surgeon of the seventeenth century, who, he maintains, was a pioneer in suggesting the germ theory of disease. From a review of M. Mollière's book, in "Lyon médical," we learn that some account of Goiffon was preserved in a work entitled "Les Lyonnais dignes de mémoire," written by the Abbé Pernetti, whom the surgeon had cared for in his childhood. In addition to this, M. Mollière has been so fortunate as to establish the authorship of a little book written by Goiffon, published anonymously in 1721. It was published for the guidance of physicians during epidemics of the plague.

The idea of a *contagium vivum*, in some crude form, is indeed by no means a new one, and there is at least one old book in the Library of the Surgeon-General's Office the author of which went so far as to give figures of the organisms which he supposed were the causes of several individual diseases. It is worthy of note that most of those who long ago had a glimmering of the morbific agency of micro-organisms viewed them as belonging to the animal kingdom. It is not surprising, therefore, to find Goiffon referring to them as "des vermisseaux, des petits vers, des insectes, des petits corps animés." As regards their minuteness, he suggests that they may be as much smaller than the mite as the mite is smaller than the elephant, and this intimation is *prima facie* evidence that he wrote not from any actual observation of micro-organisms, but in the ingenious pursuance of his theory. Hence we can not accord much more scientific value to his writings than to the lines—

Great fleas have little fleas
  And lesser fleas to bite 'em,
And these small fleas
  Have smaller fleas,
  And so *ad infinitum.*

THE NEW VOLUME OF THE ACADEMY OF MEDICINE'S "TRANSACTIONS."

Since our last issue was made up, we have received a copy of the fourth volume of the "Transactions of the New York Academy of Medicine." Several years had elapsed since the publication of the preceding volume, and some uncertainty may have been felt as to the continuance of the series. Any such feeling ought to be set at rest by the announcement by the Committee on Publication that the fifth volume will be ready for delivery "in about five weeks." The volume now before us contains papers by Dr. F. A. Castle, Dr. F. H. Bosworth, Dr. E. B. Bronson, Dr. I. E. Taylor, Dr. W. G. Wylie, Dr. T. G. Thomas, Dr. Fordyce Barker, Dr. C. Heitzmann, Dr. R. F. Weir, Dr. P. A. Morrow, Dr. G. B. Fowler, Dr. Leonard Weber, Dr. H. J. Garrigues, Dr. Robert Abbe, Dr. D. B. Delavan, Dr. R. W. Taylor, Dr. R. W. Amidon, and Dr. A. L. Ranney. Some of these papers are notable contributions to the progress of medicine, and all of them are well worthy of preservation in the tasteful form presented by the volume, which is distinctly in advance of that of the preceding volumes. Much credit for this improvement is due the Committee on Publication, Dr. J. E. Janvrin, Dr. F. A. Castle, and Dr. J. C. Peters. We have had frequent occasion to allude to unmistakable signs of the Academy's growing usefulness and prosperity, and this resumption of its publications is one of the most significant of those signs.

MINOR PARAGRAPHS.

OLIVER WENDELL HOLMES.

On the 17th of June, as is set forth by our London contemporaries, Dr. Holmes received the degree of doctor of letters from the University of Cambridge. The orator of the occasion remarked that the words applied to Addision, "Phœbo ante alios dilectus," might appropriately be transferred to Holmes, and concluded with these words: "Videor mihi vatem quendam canentem audivisse, illum cujus in corde æstas æterna floreret, non vocandum esse senem. Equidem juventutis perpetuæ fontem illum quem trans æquor Atlanticum Hispanorum nautæ frustra quærebant, nautam hunc feliciorem, non fabulosas inter insulas sed Academicæ juventutis in amore perpetuo, in amore mutuo, invenisse crediderim. Trans occidentis amplum illum sinum, levi phaselo vectus, diu naviget; nautili illius ritu, quem versibus tam pulchris descripsit, indies 'per ampliora ad altiora' tendat. Suam Academiam, per tot sæcula feliciter conservatam, intra paucos menses carmine sæculari iterum celebret, diuque superstes ipse exornet; nostræ denique Academiæ honoris causa adscriptus, diu et nostrum et totius litterarum reipublicæ ad fructum floreat, vigeat, valeat, litterarum doctor, Oliver Wendell Holmes."

THE OBSTETRICAL SOCIETY OF LONDON.

We are glad to see that the "Transactions" of the society are now to be published in parts. Part 1, for January and February of the current year, has reached us, containing the history of a "Case of Rupture of the Uterus," by Mr. Lovell Drage; a paper entitled "Cancer (?) of the Body of the Uterus removed by Enucleation," by Dr. Galabin; one on "The Production of the Shape of the Oblique Pelvis of Nägele," by Dr. G. Ernest Herman; one on "A Case of Gastrotomy for Extra-uterine Gestation in which the Placenta never came away," by Dr. James Braithwaite; "Fungating Papillomata of both Ovaries," and "A Case of Removal of both Ovaries during Pregnancy," by Mr. J. Knowsley Thornton; and the President's annual address, by Dr. John Baptiste Potter. We understand that subscribers are given their choice between the publication in parts and the annual volume. We imagine that many of them will choose the former, and we think the society has acted wisely in deciding upon that form of publication.

CHARGES AGAINST A SANITARY OFFICIAL.

The Mayor of New York having preferred charges against the president of the Board of Health, founded on the alleged complicity of the latter in corrupt action relative to the purchase of property for an armory for one of the city regiments, the Governor has listened to the arguments presented by counsel for the Mayor and for General Shaler. The point urged in General Shaler's behalf was that the acts charged were not committed by him in his capacity as president of the Board of Health, and that therefore they did not constitute "cause" for his removal from that office. In opposition to this the Mayor's counsel maintained that the acts charged constituted an offense against the laws of the municipality, and that therefore it was competent for the Mayor to act. At the time we write, the Governor's decision has not been made known.

DR. VINCENT Y. BOWDITCH ON HOMŒOPATHY.

In the "Boston Medical and Surgical Journal" for June 30th Dr. Vincent Y. Bowditch concludes a lecture delivered by him before the Hahnemann Society of the Boston University School of Medicine. The lecture is in the form of elaborate answers to various queries propounded by the representatives of the school, under the title of "Homœopathy as viewed by a Member of the Massachusetts Medical Society." It strikes us as exceedingly fair, temperate, and logical, and we hope that its delivery may have made some impression on those who listened to it.

THE SOCIETY OF AMERICAN PHYSICIANS.

We must treat this organization gingerly, for one of our contemporaries points out that it has been guilty of the heinous offense of putting the word "the" into its title, instead of calling itself *a* Society of American Physicians; and another of our contemporaries has made the interesting discovery that it was organized partly for the purpose of constituting itself the central figure in the proposed confederation of special societies.

NEWS ITEMS, ETC.

Infectious Diseases in New York.—We are indebted to the Sanitary Bureau of the Fourth Division of the Health Department for the following statement of cases and deaths reported during the two weeks ending July 6, 1886:

DISEASES.	Week ending June 29.		Week ending July 6.	
	Cases.	Deaths.	Cases.	Deaths.
Typhus	0	0	1	0
Typhoid fever	9	1	8	1
Scarlet fever	30	7	13	3
Cerebro-spinal meningitis	7	7	4	4
Measles	35	9	62	10
Diphtheria	74	32	80	35
Small-pox	3	0	0	1

The Pasteur Institute in New York.—A recent newspaper account of the affairs of this institution represents one of the chief promoters as having said that, "unless the public began to show more interest than hitherto in the American Pasteur Institute, and did something to support it, the last rabbit would be cremated at the end of August, and the virus destroyed." This was coupled with the statement that, except twenty dollars subscribed, the whole expense of the undertaking had been borne by the gentleman in question.

The German Hospital.—We are glad to learn that the festival lately held in aid of the German Hospital and Dispensary proved successful. It is announced that the net receipts are estimated at $4,000.

Personal Items.—Dr. H. Marion-Sims and Dr. George Henry Fox, of New York; Dr. E. C. Dudley, of Chicago; and Dr. J. S. Radcliffe, of Washington, sailed for Europe last week.

Army Intelligence.—*Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from June 27, 1886, to July 3, 1886:*

McParlin, Thomas A., Colonel and Surgeon. Granted leave of absence for two months, with permission to apply for an extension of one month. S. O. 146, A. G. O., June 25, 1886.

Page, Charles, Lieutenant-Colonel and Surgeon. Leave of absence extended ten days. S. O. 146, A. G. O., June 25, 1886.

Magruder, D. L., Lieutenant-Colonel and Surgeon. Granted leave of absence for two months, to take effect on or about July 1, 1886. S. O. 146, A. G. O., June 25, 1886.

Promotions.

Brown, Joseph B., Lieutenant-Colonel and Surgeon. To be surgeon, with the rank of colonel, January 24, 1886. Circular, A. G. O., June 28, 1886.

Heger, Anthony, Major and Surgeon. To be surgeon, with the rank of lieutenant-colonel, January 24, 1886. Circular, A. G. O., June 28, 1886.

Vickery, Richard S., Major and Surgeon. Assigned to duty as surgeon in charge of Army and Navy General Hospital at Hot Springs, Arkansas. S. O. 150, A. G. O., June 30, 1886.

Naval Intelligence.—*Official List of Changes in the Medical Corps of the United States Navy for the week ending July 3, 1886.*

Green, E. H., Passed Assistant Surgeon. Ordered to the Naval Laboratory at Brooklyn for temporary duty.

Brown, J. M., Medical Director. Appointed member of the Retiring and Examining Board.

Ogden, F. N., Assistant Surgeon. Ordered to the Juniata.

Siegfried, C. A., Surgeon. Granted three months' leave of absence abroad.

Hall, J. H. H., Passed Assistant Surgeon. Detached from the Museum of Hygiene, and ordered to the Naval Hospital at Brooklyn.

Wentworth, A. R., Assistant Surgeon. Detached from the St. Louis, and ordered to the Brooklyn.

Decker, Corbin J., Assistant Surgeon. Ordered to the St. Louis.

Berryhill, T. O., Assistant Surgeon. Ordered to the Museum of Hygiene.

Marine-Hospital Service.—*Official List of Changes of Stations and Duties of Medical Officers of the United States Marine-Hospital Service, for the two weeks ended June 26, 1886:*

Sawtelle, H. W., Surgeon. To proceed to Wilmington, Cal., on special duty. June 22, 1886.

Wheeler, W. A., Passed Assistant Surgeon. Granted leave of absence for thirty days. June 23, 1886.

Williams, L. L., Assistant Surgeon. To proceed to Buffalo, N. Y., for temporary duty. June 24, 1886.

Norman, Seaton, Assistant Surgeon. To proceed to Cleveland, Ohio, for temporary duty. June 26, 1886.

Society Meetings for the Coming Week:

Monday, *July 12th:* New York Ophthalmological Society (private); New York Medico-Historical Society (private); New York Academy of Medicine (Section in Surgery); Boston Society for Medical Improvement; Gynæcological Society of Boston; Burlington, Vt., Medical and Surgical Club; Norwalk, Conn., Medical Society (private).

Tuesday, *July 13th:* Medical Societies of the Counties of Clinton (semi-annual—Plattsburgh); Jefferson (semi-annual—Watertown); Madison (annual); Oneida (annual—Utica);

Ontario (annual — Canandaigua); Rensselaer; Schuyler (semi-annual); Tioga (Owego), and Wayne (annual), N. Y.; Newark, N. J., and Trenton, N. J., Medical Associations; Norfolk, Mass., District Medical Society (Hyde Park).

Wednesday, *July 14th:* Medical Societies of the Counties of Albany; Cayuga and Seneca (annual); Tri-States Medical Association (Port Jervis); Franklin (quarterly—Greenfield); Hampshire (quarterly—Northampton) and Worcester (Worcester), Mass., District Medical Societies.

Thursday, *July 15th:* New Bedford, Mass., Society for Medical Improvement (private).

Saturday, *July 17th:* Clinical Society of the New York Post-graduate Medical School and Hospital.

OBITUARY NOTES.

Timothy Richards Lewis, M. B., C. M., of the Medical Department of the British Army, died on the 7th of May, and his career and services are suitably noticed in the "British Medical Journal" for June 26th. Dr. Lewis fairly won an excellent standing as a sanitarian, and was perhaps best known for his investigations of chyluria and the *Filaria sanguinis hominis.*

Proceedings of Societies.

NEW YORK COUNTY MEDICAL ASSOCIATION.

Meeting of May 17, 1886.

The President, Dr. Charles A. Leale, in the Chair.

Extra-uterine Gestation.—Dr. W. T. Lusk related the history of a case as follows: The patient, aged thirty-five years, had been married fifteen years; during fourteen years of her married life she had enjoyed perfect health; she had menstruated regularly but had had no children. She menstruated for the last time in September, 1883. Her physician, Dr. Lee, wrote him that one month later she was seized with very violent pains. According to his statement the pains were upon the left side, but Dr. Lusk thought there were some doubts about that. Dr. Lee was obliged to go South, and transferred his patient to another physician, who wrote Dr. Lusk that while he had charge of her she had two or more paroxysmal attacks, the pain originating (if Dr. Lusk remembered correctly) upon the right side. The paroxysm lasted on one occasion two hours. When he saw the patient she was suffering intense agony; her face was pallid; a cold perspiration covered her forehead; it was impossible for her to lie down. The last severe paroxysm was on the 23d of October. From that time she had all the symptoms of pregnancy. In December Dr. Lee returned, and he wrote that until the following July she had not a single uncomfortable symptom. The fœtal movements were very active until the 17th of June, 1884, when they ceased. About the middle of July Dr. Lee was sent for, and found the patient in labor. Up to this time he had had no suspicion that the case was not one of ordinary pregnancy. He found the uterus somewhat high and pushed forward, the cervix somewhat softened, and the pains feeble and not expulsive. The next morning he learned that the patient had slept during the night. On making an examination, he found the uterus empty, and a tumor outside of the uterus. The thought now passed through his mind that the case was one of extra-uterine gestation, but, as this was extremely rare, it did not strike him as being very probable. He sent to Milwaukee for Dr. Marks, who confirmed his statement that the uterus was empty, but did not decide positively what the tumor outside of the uterus was. The following September Dr. Lee went to Chicago and consulted one of the most eminent gynæcologists of that city. This gentleman said most positively that the woman had not a single sign of extra-uterine gestation, but that she had a large fibroma. During the winter the patient was in good health. During the spring the tumor was found to have diminished in size. She now came to New York and consulted Dr. Barker, who at once pronounced the case, from the perfectly clear history the patient gave and from the objective symptoms, one of abdominal pregnancy. Dr. Barker invited Dr. Thomas and Dr. Lusk to see the patient with him, and they confirmed his diagnosis. This was in February, 1885. As the patient was going to her home she promised Dr. Barker that she would return the following June to be operated upon; should her health then be good, it was possible she might postpone her visit until September. After returning home she had an attack of what her physicians called remittent fever of a malarial character, for she lived in a malarious region. But the morning temperature did not fall below 100° or 101° F.; the afternoon temperature was about 103°. But Dr. Lusk thought that when one saw the fœtus nine months later, with most of the soft parts absorbed or undergoing putrid change, and the placenta entirely absorbed, he could not help believing that, although the symptoms were not purely those of septicæmia, the patient was, nevertheless, suffering at that time with symptoms of putrid absorption. Subsequently she visited a friend who had a child sick with diphtheria. She contracted the disease, but recovered. Then she was poisoned by poison ivy, which prevented her from returning to New York during the summer. Dr. Lee advised her in the autumn to return for an operation. Her pulse had become rapid; she had marked nervous disturbance, and afterward, and perhaps at this time, she had diarrhœa. However, she attended to her domestic and social duties. She was visibly losing strength from day to day, but there was no special time when it could be said that she was suffering from the symptoms of putrid absorption.

In December, after urgent solicitation by her physician, the patient started for New York to submit to an operation, but on the way she was persuaded by some of her friends to consult the eminent gynæcologist in Chicago again, who now modified his opinion regarding the nature of the growth, and agreed in the diagnosis made by Dr. Barker. He, however, told the patient that she should under no consideration allow herself to be operated upon; that the operation was a very difficult and a very dangerous one; that he had operated four times himself, and all his patients had died; that statistics showed that death almost invariably followed; that she was not in danger from her present condition; that all she required was to go South, live out of doors, get fresh air, and keep out of the hands of physicians. The patient, after receiving this advice, returned home and remained three months, being unable to leave her room. She then managed to get to New York, and for a day or two after her arrival, inspired by a new hope and a change of surroundings, she showed a little improvement. After remaining in the city for three or four days she sent for Dr. Lusk. A marked change had taken place since her last visit to the city; her features were pinched, she had lost flesh, the pulse was quick and feeble, there was a slight rise of temperature in the evening, and she had diarrhœa alternating with constipation. After three or four days her menstrual period came on, and associated with it was a rise of temperature to 103° or 104° F., the pulse became extremely feeble, she was unable to retain anything on the stomach, there was enormous distension of the abdomen, the tumor itself apparently increased much in size, and there was evidently a certain amount of fluid in the abdominal cavity. Dr. Lusk felt much alarmed, but the patient's husband assured him that there was no occasion for fear, as a similar unfavorable change took place at each menstruation, to pass off again during the interval. After consultation with Dr. Barker and Dr. Thomas, it was decided to send the patient to St. Elizabeth's Hospital, and to postpone the operation until a week before the next menstrual period, with the hope that in the mean time her condition would improve. Unfortunately, her husband's predictions were not fulfilled. From this time her condition grew worse, and by the 12th of March, 1886, she had failed to such a degree that he was extremely doubtful as to the propriety of performing any operation. Dr. Barker entertained a like opinion, and on the 14th Dr. Thomas saw her and told her husband that the chances of recovery after an operation would be only one in a thousand. The operation at that time, therefore, was abandoned, but afterward her husband went to Dr. Lusk and persuaded him, as a special favor to him, to operate. The 19th of March was set as the day for operation. The tumor was found to occupy nearly the entire abdominal cavity, and to extend as far to the left side as to the right. The incision was made below the umbilicus. The blood which came from the vessels as the skin was cut through was almost colorless, appearing more like serum than like healthy blood. After the abdominal walls had been cut through, the tumor was seen with portions of the fœtus showing through its walls. There were no visible adhesions anywhere, and a bystander suggested that the tumor be lifted out entire, but that was impossible, for the patient was too nearly in a dying condition when the operation was begun to justify prolonging it any more than was absolutely necessary. When the tumor was cut into there escaped a volume of gas of an extremely fœtid odor. There was no fluid in the sac, except about a tablespoonful of pus. The walls of the sac were stitched carefully to the abdominal walls, so that none of its contents could possibly enter the abdominal cavity. The fœtus presented by the back at the incision, and was extracted by the breech. The two parietal bones dropped off and were scooped out of the sac with the hand, together with the small bones of the feet.

The patient received a good many hypodermic injections of whisky during the operation, and was alive at its conclusion. Dr. Lusk operated somewhat slowly, in order to avoid the entrance of any putrid matter into the peritoneal cavity; the operation lasted about thirty minutes. The patient's temperature fell after the operation, and for twenty-four hours there was a little hope of her recovery. At the end of that time, however, her temperature rose and reached 104° F., the pulse became rapid, she no longer retained food, and diarrhœa, which had existed for some time, prevented rectal alimentation. She died of starvation thirty-six hours after the operation.

Dr. Biggs made the autopsy. The cavity of the sac was of about the size of a child's head; the uterus was attached to it posteriorly, and was about as large as a virgin uterus. Connected with the sac, its fibers being lost in its walls, was one Fallopian tube. This fact was interesting, as it showed that in the beginning the case was undoubtedly one of tubal pregnancy, which had given rise, by over-distension, and finally by bursting, to paroxysmal pains. The sac had the gross appearance of uterine tissue, but Dr. Biggs found on microscopical examination that it was composed entirely of connective tissue except where the fibers of the Fallopian tube became lost in its walls. It had become firmly adherent to the line of incision in the abdominal walls. There was not the least sign of fresh peritonitis. There was considerable ascitic fluid in the abdominal cavity. The tumor was quite firmly adherent to the intestines on the right side; consequently it would have been impossible to remove the sac with its contents entire while the patient was upon the operating table.

Dr. Lusk thought the case was chiefly interesting from the fact that the patient had been the victim of what he believed to be wholly erroneous teaching. The text-books stated, and he did not know but his own contained the same statement, that these tumors should not be removed until the health of the patient began visibly to decline. But each person judged for himself when a decline in health was taking place; each one had some opinion peculiar to himself as to what constituted the symptoms of septicæmia, and if those symptoms were not present he would be apt to say it was better to let the patient alone, thus waiting until the time had gone by when an operation would be likely to prove successful. The gentleman who had told this patient that he had operated four times, and every time with a fatal result, and advised so strongly against her submitting to an operation, had recently reported a case in which the patient had reached the moribund state before he operated. If the three other patients had been operated upon under similar circumstances, he had had no reason, Dr. Lusk thought, to hope for a different result. There was no reason whatever for giving this advice, except the belief which seemed to prevail pretty generally that a large number of these cases terminated in recovery. But statistics, he believed, showed that the number of patients who carried the fœtus some years was small; and the number of those in whom it was not a source of constant pain and distress was still smaller. He thought that the feeling of humanity demanded the removal of the child soon after its death; that we should not wait for those symptoms to develop which we believed to indicate that the patient's constitution was declining. He had not been able to look over the statistics with great care, but, so far as he had studied them, he thought they showed recovery in nearly all cases of removal of the fœtus soon after its death and while the patient's health remained relatively good; that the operation was not a very dangerous one; on the contrary, the results seemed to be excellent. The unfavorable statistics arose from the report of cases of operation under conditions like those which he had just narrated.

The development of symptoms of putrid absorption was very insidious. In looking over the histories of a great many cases he had found in only a few anything very marked in the symptoms. The patients had declined in health, but there had been nothing characteristic in the change. Yet on opening the tumor the gases of putrefaction escaped, and it was evident that the conditions for giving rise to putrid infection were present. Dr. Lusk thought that, in the class of cases under consideration, the putrid infection primarily affected the blood; the blood-corpuscles were destroyed, and then degeneration took place in all the parenchymatous organs, and when they had become unable to perform their functions properly the time had gone by when an operation could be performed with the hope of good results.

Dr. Lusk then exhibited a specimen which Dr. Reginald H. Sayre removed from a patient of his last summer, a brief history of which has already appeared in this journal. In that case the fœtal remains escaped through the vagina and rectum. The patient had the symptoms of intense septic poisoning, but the attack came on before her health had become impaired, and this fact, together with the intelligent care which she received from Dr. Sayre, accounted for her recovery.

Dr. Reginald H. Sayre said he could add nothing to the history of the case referred to by Dr. Lusk in the latter part of his remarks which would be of interest to the meeting. He thought that, had the patient been operated upon before sloughing took place into the vagina, she would have been saved a great deal of suffering. He fully agreed with Dr. Lusk that a great many women lost their lives for want of a timely operation for abdominal pregnancy.

Dr. R. H. Saunders related the history of a woman who visited the clinic at Mt. Sinai Hospital in February last. She had been married two years and a half. When he saw her she complained only of some pain in the back and abdomen; there was rather a copious vaginal discharge, which was continuous. She said there was beginning emaciation. There were no symptoms which could be called septic; no elevation of temperature, sweating, loss of appetite, or diarrhœa. She said she had been seen a year before by Dr. Thomas, Dr. Tauszky, and also at one time by Dr. Lange—all of whom had said there was abdominal gestation. Her family physician had seen her at the calculated fifth month, and thought the fœtus was in the uterus; but at a subsequent examination he diagnosticated extra-uterine gestation. According to her statement, she had not ceased to menstruate through gestation, nor since. Since the ninth month the abdomen had become smaller. When Dr. Saunders examined her the abdomen was considerably enlarged, but not excessively so. Apparently it contained absolutely no fluid, and, inasmuch as it was said to have decreased in size, he inferred that it had contained fluid which had been absorbed. The woman being somewhat emaciated, he could distinctly make out the form of the fœtus, which lay with the buttocks toward the liver, and the head downward and to the left. By vaginal examination he could feel the fontanelles. All movements had ceased two months before term. The patient had not kept her promise to return.

Further cases were related by Dr. Sayre, Dr. Hinton, Dr. Porter, Dr. Arnold, and the President.

BROOKLYN PATHOLOGICAL SOCIETY.

Meeting of January 28, 1886.

The President, Dr. B. F. Westbrook, in the Chair;
Dr. A. H. P. Leuf, Secretary.

A Case of Great Hypertrophy of the Heart from Valvular Disease.—Dr. Glentworth R. Butler said that the case the history of which he presented had occurred in his service at St. Mary's Hospital:

A. G., aged twenty-nine years, a native of the United States, a waiter, was admitted to the hospital January 5, 1886. His family history was negative. He complained of gastric distress, swollen feet, and urgent dyspnœa. The dyspnœa began in the early part of September, 1885, and was coincident with his gastric symptoms. He had suffered frequently from acute rheumatism, the attacks dating from the ninth year of his age. He had recently spit blood on two occasions.

The physical signs on admission were as follows: Face cyanotic, pulse rapid, excessively irregular, and very small. The jugulars were distended and pulsating. The chest was deformed, the sternum at its lower part was thrown forward, and the ribs were depressed laterally. Over the entire præcordia and beyond its borders a heaving pulsation was plainly visible. The apex beat was felt two inches to the outside of and two inches and a half below the nipple. The præcordial area of dullness was greatly increased, extending from two inches to the left of the nipple across to the right of the sternum. Epigastric pulsation was marked. This region, as well as the hepatic, was painful on pressure, and the liver could be felt to pulsate on attentive examination. Auscultation revealed a tumultuous action of the heart. The only murmur to be distinguished at that time was a systolic bruit most intense over the tricuspid area, but also heard at the apex. There was also a suspicion of a diastolic murmur at the apex, but the diastole was too short to determine the fact.

Rest, turpentine stupes over the epigastrium, extract of *Cactus grandiflora* in ten-minim doses, iron, and a mineral acid improved his condition somewhat. On January 9th digitalis was substituted for the *Cactus grandiflora*, and dry cups were applied over the liver. On January 15th the heart was acting with much greater regularity and the pulse was materially changed, presenting the characters of aortic regurgitation. On auscultation, a to-and-fro murmur was distinctly made out over the aortic orifice, the diastolic portion being most intense at the apex. The systolic murmur over the tricuspid area had well nigh disappeared. The patient's symptoms improved somewhat during the next few days, but death occurred suddenly on the 22d of January, seventeen days after his admission.

The case was interesting from a diagnostic point of view. The result of the first examination led to a probable diagnosis of mitral stenosis, with tricuspid regurgitation, although at no time during the progress of the case was there a presystolic murmur. The signs pointing toward this lesion were the smallness of the pulse, cyanosis, jugular and hepatic pulsation, with evident hypertrophy and distension of the right heart. When the cardiac muscle had partially regained its power the right heart emptied itself more completely, as evidenced by the lessened intensity of the murmur over the tricuspid area and the disappearance of cyanosis and concomitant symptoms. The left ventricle being better filled and contracting more strongly, the diastole too being longer, propelled its contents with sufficient force to develop the to-and-fro murmur of aortic stenosis and incompetence.

The autopsy was made on January 24th by Dr. A. H. P. Leuf. The pericardium was everywhere adherent, the pericardial cavity being non-existent. The heart, including the adherent pericardium, weighed thirty-six ounces. Both sides of the heart were enormously distended with blood. The mitral orifice was stenosed, hardly admitting two fingers. The aortic orifice was stenosed and the valve incompetent. The cusps of the aortic valve were thickened and adherent for about one third of the extent of their edges. The posterior cusp especially was thickened, and was the main factor in the incompetency. The liver was of the nutmeg variety. There was an accessory spleen of the size of a pea, with a long pedicle.

A Case of Angina Pectoris.—Dr. Butler also read the following history of a case seen at St. Mary's Hospital:

F. C., a woman, thirty-five years of age, married, a native of Ireland, was admitted to St. Mary's, January 6, 1886. She had been in good health, with the exception of occasional attacks of facial neuralgia, until August, 1885, when she began to suffer with paroxysms of pain which were referred to the præcordial region. Slight and occasional at first, they became more frequent and severe, until at the time of her entrance into the hospital they were excited with a varying degree of acuteness by the ingestion of food, motion of any sort, or long-continued conversation. The pain was described as commencing at a point just to the left of the lower end of the sternum, extending through to the back, and down through the shoulder and arm of the corresponding side to the hand. A sense of numbness and pricking in the arm and hand accompanied the pain, which was described as lancinating. In her severest attacks, a fear of immediate death and a sensation of dyspnœa were experienced. Swelling of the feet and legs sometimes occurred. Her appetite was poor, her body was well nourished, and bowels and menstruation were normal in regularity. Physical examination revealed a somewhat slow pulse of high tension, so far as could be determined by the touch. The sphygmograph was not employed. The heart was apparently normal in size. The only auscultatory deviation from the normal was a decidedly accentuated aortic second sound. Fowler's solution and nux vomica with rest in bed, and nitrite of amyl for the relief of the paroxysms of pain, constituted the treatment. The patient progressively improved under this regimen. The paroxysms were invariably cut short by the nitrite of amyl, and, subjectively, nothing unpleasant remained but a "fluttering" of the heart, until the morning of January 23d, when she had a paroxysm, which was relieved by the usual remedy. On the afternoon of this day another attack occurred, which proved promptly fatal. The autopsy was made on January 24th by Dr. A. H. P. Leuf. A large part of the ascending portion of the aorta was atheromatous. The anterior portion was much thickened at the base of the aortic cusps, the latter being also somewhat thickened with loss of normal curve and elasticity, but still competent. The coronary arteries were constricted and narrowed at their origin and emergence from the aorta, the anterior coronary especially. The papillary muscles of the left ventricle were affected with fibrous degeneration.

A Specimen of Pulmonary Tuberculosis, with History.—Dr. John Horn said that the specimen which he presented was from a case of phthisis in which the symptoms during life were very well marked, and in which the pathological changes were extremely characteristic. The specimen was removed from the body of Peter H., twenty-four years of age, born in the United States, laborer, who came to St. Mary's Hospital, on December 5, 1885, complaining of a short hacking cough, which had existed for about a year and a half, and which had been on the increase for a few months previous to his admission into the hospital. He had had night-sweats, frequent chills and elevations of temperature; he had become emaciated and had lost his appetite. He gave no history of hæmoptysis or any suspected previous pulmonary trouble, and was not aware that he was suffering from phthisis. His sister died of phthisis; otherwise his family history could not be ascertained. Physical examination showed positive signs of phthisis. He received the necessary care and treatment and got along very well until January 19th, when he expressed himself as feeling too weak to leave his bed, and he died the next day, January 20th, having, during his stay at the hospital, been able to walk about the ward every day with very few exceptions. The *autopsy*, made by Dr. Leuf, revealed old pleuritic adhesions on both sides. The right lung contained a large cavity in its upper lobe. The middle lobe was solid with tubercles which were becoming yellow—some were already yellow. The lower lobe was carnified. The upper third of the upper lobe formed one single cavity; the rest consisted of smaller cavities and dilated bronchi. In squeezing a section of the right lung it was noticed that there exuded a thick, tenacious, muco-purulent material from the bronchi; the walls of the bronchi were thickened; the bronchial glands were swollen and caseous. A number of nodular masses were felt on palpation in the substance of the lung; they were the so-called tubercle masses which were made up of several tubercle follicles, these tubercle masses had between them lung tissue which was very much congested. The right lung showed the various stages of phthisis very well, the lower lobe being in the condition described as acute phthisis, while the middle and upper lobes were in the more advanced stages. In examining the left lung it was found that the whole upper lobe was one large cavity; the lower lobe had undergone cheesy pneumonia, probably tubercular.

A Case of so-called Hermaphroditism.—Dr. A. H. P. Leuf exhibited the body of an eighteen-months-old child upon which he had made an autopsy at the Morgue for Coroner Menninger, who had suggested showing it to the society because of its supposed double sex. Dr. Leuf said he was particular to say so-called hermaphroditism, because he did not believe there was a true one except among the lowest order of animals. It was impossible to imagine by what freak of nature such a monstrosity could be developed. It was easy enough to account for double-headed, or double-bodied, or four-armed, or four-legged monsters, but not for a double sexual apparatus alone. What we knew of embryology was sufficient to set at rest any idea of the possibility of true hermaphroditism. All the cases so reported were those of pseudo-hermaphroditism, and owed their appearances to intercepted development or excessive growth of a part of the external genitalia. Every one of these cases admitted of a positive establishment of the true sex if a sufficiently thorough examination was permitted. In males it sometimes happened that the scrotum was fissured with or without a failure in the descent of the testicles. If, in connection with this, there was a hypospadias so marked as to place the urethral opening at the peno-scrotal junction and the penis was poorly developed, the appearance of the female genitalia was readily presented on superficial examination or inspection. Each section of the scrotum represented a labium majus, and the space between, the opening of the vulva. The extreme hypospadias would make the urethral orifice appear as though projecting forward from the vestibule, and the diminutive penis would take rank as an enlarged clitoris. Close inspection would easily settle the question in even so extreme a case. On the other hand, the female might be mistaken for a male if the hymen was imperforate with the labia wholly or partly united and the clitoris enlarged. Other modifications lent additional uncertainty to an accurate estimation of the true sex without thorough investigation. Examination, ever so carefully made, by an ignorant person, whether professional or not, was certain in many of these cases to lead to confusion and a report of another case of hermaphroditism. Certain pathological conditions of the external genitalia added still more to the difficulty in establishing the true sex without thorough investigation. He had seen a number of these persons, some of them positively believed to be double-sexed by even medical men, and yet the differentiation had been easy.

Modern Adulterations in Foods and their Relations to Disease.—Dr. E. H. Bartley read a paper with this title. [It will be published hereafter.]

Dr. G. V. Convery thought that it was best to particularize foods that were adulterated and adulterants. The writer upon this subject in von Ziemssen's "Encyclopædia" made such a classification. There was not much food adulteration here when compared with its extent in other countries. Our supply of flour was so abundant that adulteration did not pay. It was true that we might find from thirty-two to one hundred and sixteen grains of alum in single loaves of bread, but it was introduced to make a whiter article than usual. Flour adulteration with us consisted only in mixing brands of different grades. Alum in flour was dangerous to children, because it made insoluble the phosphates when pap was prepared. We had adulterations of confectionery and arrow-root, also those of coffee essence. Coffee was often falsified by the addition of beans, chicory, peas, etc. So-called ready-ground coffee very often contained no trace of the article, but consisted of beans, peas, chicory, etc. Tea was adulterated with other herbs. "Overland" tea looked bad, but was good. In its passage across the continent (whence the name) it was shaken and crushed in railroad transit and partly pulverized. Preserved foods presented a rich field for falsification. Many of those that admitted of it were swollen in bulk with gelatin. Apple-sauce was also made of decayed apples, pumpkins, and gelatin. Sulphuric-acid vinegar was well known. Mustard and the chromate of lead and butter and copper mixtures were not infrequent. Cheese and oleomargarine combinations belonged to a later order. Cream was skimmed-off milk and oleomargarine substituted in its place. Cheese was also at times washed with bichloride of mercury or arsenic solutions. Diluted milk was also harmful to young children, or infants depending upon it solely for support. Spice was often composed of powdered "hard-tack" and flavors. Then there were Cayenne pepper adulterations and those of chocolate and cocoa. These various falsifications were alluded to by him because they had not been mentioned in the paper, and he desired to have Dr. Bartley avail himself of them in elaborating the discussion and to indicate to him some additional fields of usefulness as a public health officer.

Dr. Lucy M. Hall related her experience with cooked meats. In an institution with which she had been connected as physician and teacher she had observed several hundred persons. On several occasions there was considerable sickness, commencing with gastric disturbance and lasting some hours, that always followed a certain kitchen experience—that of the meats having been retained closely covered in the pots in which they had been cooked. This mode of preparation and care was always followed by the same results. The former was stopped, and the latter no longer occurred. She was convinced that meat spoiled quickest when kept well covered in the pot or dish in which it had been cooked. She also related an instance in which a well-known brand of condensed milk was for a time discarded in the same institution because of a somewhat similar neglect to properly handle the milk.

Dr. R. G. Eccles was reminded of an Indian experience. A man and wife were taken sick from eating bread prepared at home. On examination of the bread and flour, an alkaloid was found. It had developed in the flour. All specimens of the same lot in different sections contained the same dangerous element. He could not agree with Dr. Bartley in his explanation of the way in which gelatin was dangerous. All pharmacists sold Cooper's glue and French gelatin. It was at first free from all germs. It would keep if well sealed. The production of ptomaines in gelatin was limited. Simple gelatin alone was not used to develop germs. For this purpose it was necessary to incorporate with it some broth. The experience of both Dr. Hall and Dr. Bartley with meat was noticeable. He had seen Indians drive the crows and vultures off stinking carcasses lying on the plains, and eat them themselves without any bad results. He supposed that this was due to the carcasses not having been confined. The putrefactive germs became accustomed to getting along with little oxygen if the matter in which they developed and throve was in a limited oxygen supply, and, if they were then introduced into the human stomach, they managed to live on what little oxygen they could get, and for a time set up trouble. If, however, they throve on a body freely exposed to this gas, they became accustomed to a great deal of it, and died when they entered the stomach, because the supply was inadequate. He was not much interested in beer adulterations. He had not quite got the drift of Dr. Bartley's views with reference to the use of antiseptics in beer. If they were used too early, all germ action would be inhibited, including that of yeast. This would shut off the proportion of alcohol. It seemed to him that, when using salicylic acid, enough would have to be employed to make its bitter taste easily perceptible. The bicarbonate of sodium would help to counteract this, but also the antiseptic effect. He failed to see the use of the bicarbonate of sodium with the tartrates. Beer developed enough carbonic acid itself. There was a difference between the slowly developed beer of the ancients and that of rapid development of to-day. Tyndall and Pasteur said that the new quick beer was the best.

Dr. P. H. Kretzschmar referred to the blackness of Dr. Bartley's account of cases of tuberculosis resulting from the ingestion of the milk of a tuberculous cow. Other causes might have produced the disease. Thus, the first patient might have had it from some other source as well as from the cow's milk. That patient, in turn, might have given it to the next, for instance, by means of expectoration upon the floor, and its subsequent dissemination in a pulverized condition in the atmosphere. Inhalations of this might have affected the next child, and in this way the infection have been propagated from one to the other till all died. He thought it rather strange that Dr. Bartley should conclude, not until after two years, that the ice-cream-poisoning cases he mentioned were the result of gelatin poisoning instead of vanilla adulterations, as he at first reported, because all who were poisoned had eaten this flavor of cream. Bicarbonate of sodium could not be found in beer if added with tartaric acid.

Dr. Little asked if Dr. Bartley had found any strychnine in beer.

Dr. Bartley replied that he had not. In reference to Dr. Conway's remarks he had only to say that the adulterations he had spoken of were mainly found outside of this country and did not prevail here. Many teas that had been examined were found to contain less harmful substances than simply other herbs. It had been said that many fruit-jellies contained no fruit. Out of 360 cans of fruit-jelly actually analyzed, not over a dozen had been found to be made of gelatin. There were, perhaps, some factories in New York and Brooklyn that used gelatin. Out of twenty-five vinegars examined during many years, no sulphuric-acid specimen had been found, and only one of pyroligneous acid. Vinegar was made cheaply and its falsification did not pay. It had just occurred to him that a few years ago there was a series of cases of lead poisoning in New England. All the flour that these affected people had used came from the same mill. Upon examination, it was found that the miller who ground the flour had filled some holes in his mill-stones with lead. The addition of antiseptics to beer was done at the end of the fermenting process. The bicarbonate of sodium was added only twenty-four hours before the beer was delivered. That removed the objections that had been made. The objection to it was the same that could be urged against taking the same quantity in water. He did not maintain that it was always ingested as such, but it was so excreted. He was not sure, because he could not be, that the five tubercular patients he had mentioned became so from drinking the milk of a tuberculous cow. It was quite certain, though, that they did not develop it from each other, as Dr. Kretzschmar had supposed, for they all had meningeal and intestinal tuberculosis and no tubercular sputa. Concerning the ice-cream cases, he remarked that all the vanilla cream had been flavored out of the same bottle of vanilla before and after the occurrence of the cases of poisoning, so that it could not have been the cause. The total quantity was too small anyway to do any harm. He was not positive that these were cases of gelatin poisoning, but was inclined to think so. As to whether the subjects were poisoned by some alkaloid, he could not say. It took two weeks of hard work to determine that, and for this he hardly had the time.

Dr. Eccles suggested that physicians ought to instruct people as to what were the best and safest antiseptics and disinfectants Benzoic acid had none of the objectionable features of other members of this group. His last summer's experiments had showed it to be the best fluid preservative.

Meeting of March 11, 1886.

The President, Dr. B. F. Westbrook, in the Chair.
Dr. A. H. P. Leuf, Secretary.

The Pathology and Treatment of Enlarged Prostate.—Dr. F. W. Rockwell read a paper on this subject. [See p. 29.]

Dr. **Robert Newman**, of New York, had almost entirely discarded all old instruments. Some catheters had two holes, but he could see no use for them when it was desired to relieve those with retention from prostatic enlargement. Pus, blood, etc., were found in the urine of these cases, and stopped up the small openings of most catheters. The object was to allow the ropy, thick mucous strings to pass through the holes of the catheter, and thereby relieve the bladder. Now, the small holes would defeat this object. For many years he had used his own double-cannula catheter for drawing off the urine, as well as for washing out and dilating the bladder. This catheter had two separate cannulas and two openings, one for the injection and another for the return flow. The *one* fenestra for the latter was a large slit near the end of the instrument, large enough to allow thick masses of pus and mucus to pass. This slit was an opening in the middle of the instrument, which was preferable to the old catheters having a small fenestra on the outer side. But such an opening irritated the mucous lining on passing over it. It would be even better to have the opening on the inner side.

The old long curve of the catheter was useful only in very few cases. At present, the short curve gave best satisfaction. In fact, the hand of the operator guided the instrument, no matter what the curve was. He commended Dr. Rockwell's exhibition of almost all the genito-urinary instruments used in such cases, and he might add only filiform guides, tunneled catheters, and Mercier's invaginated catheter. The latter was an ingenious instrument, which often passed over the enlarged prostate when other instruments failed. But in extreme cases it might also fail. He preferred tunneled sounds, which, in his practice, had scarcely ever failed. Sometimes the introduction of a filiform guide might relieve retention for the following reason: The retention was caused by the mechanical obstruction of the enlarged prostate filling up the neck of the bladder. Now, the introduction of the filiform guide pushed the obstruction somewhat backward, and then the water would run alongside this guide and empty the bladder. This little manœuvre had an advantage, as with it micturition would be made a voluntary act, while the drawing of urine by means of the catheter was always an involuntary act. The latter weakened while the former strengthened the muscles of micturition. He preferred firm metallic instruments, which the operator could guide with his fingers, and depreciated the old elastic catheters, which were unreliable, bending like a spring, so that the operator was uncertain where the end passed on. The soft catheters were best for use by the patient himself, as he could do no harm with them. He employed for enlarged prostate rectal suppositories of potassium iodide, hyoscyamus, and nux vomica. Sometimes there was slight constipation, due either to the patient's condition or to the medicine. In such cases he added one grain of extract of colocynth. It did all the good required, though but a single grain. For spasm he added a small quantity of belladonna and with it a little opium. Some peculiar idiosyncrasies were met with at times. He had had a patient that very morning who, although he took but one tenth of a grain twice a day, had such decided pupillary dilatation as to make his sight defective. Another patient took, by mistake, a suppository of four grains of belladonna and did not have the slightest discomfort. He usually gave one grain of belladonna and one quarter of a grain of opium in one rectal suppository. Dr. Charles Mitchell, of Philadelphia, made these gelatin preparations for him to his entire satisfaction. At best, all treatment for the enlarged prostate had not been satisfactory, and, as a large majority of old men suffered from the malady, it would be desirable to establish a more rational method of cure. For the last five years he had thought of applying galvano-cautery directly to the hypertrophied prostate. After many trials and hard work he had at last succeeded in constructing the instrument, and had used it for some months with success. His instrument consisted of a smooth metal catheter, with a fenestra at the end of the curve, in which was placed a platinum wire. In the interior of the instrument was the mechanism for heating, which was done by a galvano-cautery battery. It might be done by a storage battery or even by a dynamo-machine, but the cautery must be under the absolute control of the operator. The other end of the instrument was straight and formed the handle; from this end emerged two wires, the heat conductors, which were connected by binding screws to conducting wires, which respectively went to the positive and negative poles of the battery. The current-breaker was attached to one pole at the handle. The instrument was introduced in the urethra, so that the fenestra was held against the enlarged prostate, which was then cauterized in an instant by the galvano-cautery. The instrument was light and in size equal to No. 18 French scale. The instrument and the battery must be regulated to a fixed potential for the work to be done, and so adjusted that failure was impossible. These applications were repeated at short intervals, until a cure was effected by shrinkage of the tissues. The galvano-cautery must be applied lightly, the flash of heat being instantaneous, or at most not lasting longer than a few seconds. As the same quantity of electricity under the same circumstances would always do the same work, it was essential to measure the electricity, and thereby make failure impossible. The advantages of this method were: the operation caused no pain or hæmorrhage, and patients were not detained from their business on account of the operation itself.

The same instrument had been used for the treatment of hypertrophied tonsils. Dr. Newman had used it also with success in other diseases—such as spermatorrhœa, impotence, and diseases of the bladder and urethra. If nothing else relieved the patient, it was best, as Dr. Rockwell had mentioned, to perform perineal section and make a digital exploration, in which case he would combine galvano-cautery to the prostate. Professor Bottini, of Italy, had reported two cases in which he had used the galvano-cautery *per urethram* with a different instrument. He had burned through the prostate for forty-five seconds, which was a severe operation.

Dr. **Newman** replied, in answer to a question by Dr. Eccles, that of course the battery must be gauged before each application, and that he did so. The time would come when the amount and intensity of electricity would be exactly known before each application. He knew that the wire would not get so hot in the urethra within a given time as in the air. In reply to Dr. Rockwell's query as to the quantities of the ingredients of the suppository, he said that each one contained two grains and a half of iodide of potassium, one grain of extract of hyoscyamus, and one grain of extract of nux vomica, and, if necessary, one grain of extract of colocynth.

Reports on the Progress of Medicine.

SKIN AND VENEREAL DISEASES.

By GEORGE THOMAS JACKSON, M. D.

Medicated Pencils.—This title covers what are called by their inventor, Dr. Unna ("Monatsh. f. prakt. Dermatol.," April, 1886), "Salben- und Pastenstifte," by which is meant ointments and pastes made up in a form similar to our long-known points of nitrate of silver. They are alleged to be more economical and more elegant to use than ointments, and to permit of the ready and exact application of the medicament to the desired place. The ointment-pencils are specially designed for application to the sound skin, or to the skin whose corneous layer is intact and dry, as in psoriasis, dry eczema, parasitic affections, and the like. The paste-pencils are to be used in circumscribed dermatoses in which the corneous layer is deficient, as in moist eczema and the initial lesion of syphilis; or where it is intact, but thin and devoid of fat, as in condylomata. They may also be used on mucous membranes. But they are of special use in ulcerative processes. The consistence of the "Salbenstifte" should be much softer than that of the "Pastenstifte." It is recommended that the former should be about as large as a large lead-pencil and about as long as the finger, while the latter should be of about the form and size of the nitrate-of silver point. The pencils should be put up in tin-foil, excepting those of silver nitrate, which should be coated with collodion.

The pencils are variously compounded, and a long list of formulæ is given. The basis of the "Salbenstifte" is a mixture of wax, olive-oil, and soft soap; that of the "Pastenstifte" is a mixture of starch, sugar, gum arabic, and gum tragacanth. It is useful sometimes to cover the applied ointment with a layer of liquor gutta-perchæ or collodion.

Bromide of Arsenic is one of the comparatively untried remedies for diseases of the skin. Dr. W. T. Corbett ("Medical Record," April 17, 1886) recommends it as useful in acne, specially that of reflex origin, as from undue irritation of the reproductive organs in neurasthenic persons; and in pruritus hiemalis. In both cases he makes use of the following: ℞ Arsenic bromide (Merck's), one grain; alcohol, two drachms. Dissolve and add simple elixir, eight ounces. Of this he gives a teaspoonful in water after meals, the dose being gradually increased. In either disease external treatment is made use of while the arsenic is administered.

Lanolin.—The latest addition to our list of excipients in dermatological practice is lanolin. M. Boymond ("Bull. gén. de thérap.," Feb. 15, 1886) tells us that this is not so new as we thought, as in the works of Ovid, Herodotus, Pliny, and Aristophanes mention is made of a fat derived from sheep's wool. Under the name of *œsypum* it figured in the Florentine Pharmacopœia of 1560, and in that of Cologne of 1627. In the preparation of lanolin, the sheep's wool—that from the Australian sheep is the best—is treated with an alkaline solution, which is subsequently run off from the wool and evaporated to get rid of the salts. The fatty matter is separated by a centrifugal machine.

Lanolin when purified presents itself as a fatty body, viscous, yellowish, of feeble odor and neutral reaction. It is soluble in ether, chloroform, and benzine, but insoluble in alcohol. With water containing a trace of carbonate of sodium it forms a milky emulsion which is durable. It does not saponify by ordinary means. It readily absorbs its weight of water and about twice its weight of glycerin, producing a homogeneous and stable mixture. It mixes perfectly with mercury, so that, after half an hour's trituration, no mercurial globules can be seen with the loupe. It easily takes up its weight of concentrated saline solutions, such as iodide of potassium, subacetate of lead, etc. It is readily absorbed by the skin.

Non-virulent Urethritis.—The gonococcus has been well introduced as the cause of specific gonorrhœa, and now Dr. Max Bockhart, of Wiesbaden ("Monatsh. f. prakt. Dermatol.," April, 1886), professes to have found at least two other cocci as causes of non-specific urethritis, or "pseudo-gonorrhœa." These he describes as a hitherto unknown small "staphylococcus" and an ovoid "streptococcus," which he found in the urethral discharge of several men afflicted with the malady in question, and also in the vaginal secretion of a few women. They were properly cultivated, the product was injected into the healthy male urethra, and a urethritis produced. Space does not allow us to reproduce an account of his experiments.

Dr. Bockhart believes that the disease is more common than we suspect; that it is of self-limited duration, eight to ten days, being therefore shorter than the specific urethritis; that its secretion is rather muco-purulent than purulent, and never of the thick, creamy, or greenish-yellow purulent nature of true gonorrhœa; that it is accompanied by relatively fewer inflammatory symptoms than the latter; but may cause an epididymitis. The reason why it is not more frequently met with is that the bacteria require for their growth a neutral or slightly alkaline soil, while, for the most part, the reaction of the vaginal secretions is acid. Under the influence of cervical catarrh, the menstrual flow, and some other conditions, the bacteria entering the vagina from without may grow, and, during coitus, may gain access to the male urethra, and thus the woman may become "the innocent cause of the war."

Rheumatic Urethritis is what M. P. Riel ("Lyon méd.," March 14, 21, 1886) names a form of urethritis occurring in the course of rheumatism, accompanied by a discharge of purulent fluid and other symptoms common to gonorrhœa, but differing from it in the complete absence of gonococci. M. Riel depends upon the gonococcus for his diagnosis of specific urethritis. He reports two cases of this form of urethritis, but hesitates to ascribe them solely to the rheumatism, and assumes that there must be certain, as yet undiscovered, organisms in the secretion to render it purulent.

The Treatment of Syphilis.—We are surprised to learn from Dr. James Wilson ("Lancet," March 27, April 3, 1886) that but indifferent success attends the treatment of syphilis in England. The doctor ascribes this to the bad methods of English surgeons in using mercury, iodide of potassium, and other good drugs. He holds that to administer mercury by the mouth is the worst way of giving it, and that the inunction plan is the best. For its best effect the skin of the part about to be anointed should be prepared by washing thoroughly with soap and water; or a general bath be taken at a temperature of 95° or 96°, which is preferable. An experienced rubber should be employed, and he will receive no bad consequences from the mercury if, previous to rubbing, he smears his hands with soap or lard. On successive days different parts of the body should be rubbed, and the sequence should be: First day, both legs; second day, both thighs; third day, abdomen and breast; fourth day, the back; fifth day, both arms; sixth day, both legs again. On each day from twenty to thirty grains of mercurial ointment are to be rubbed in on each side of the body, the inunction being preceded by a warm bath, and followed by an hour's rest. The rubbing should be continued from fifteen to twenty minutes. Follicular inflammation may be avoided by shaving the part about to be treated. [Our preference is for the bends of both elbows, the sides of the thorax and abdomen, the inner sides of both thighs, and the bends of both knees, as sites for inunction, as thus hairy parts are avoided. The skin of these parts being thin, the mercury is readily absorbed.] The whole palm should be used in rubbing, gloves avoided, and considerable pressure employed.

The diet and hygiene of the patient should be of the best. Salmon, eels, mackerel, Finnan haddock, salt fish, cheese, salads, and raw fruit are to be abstained from. One or two large glasses of milk should be daily drank. The mouth should be frequently rinsed with the following: ℞ Acetate of lead, ʒ iv; powdered alum, ʒ vss.; distilled water, ℥ xvj; aromatic water, ℥ viij. Dissolve the lead and alum-salts separately in the water, then mix and stir well together; either filter or allow to settle, then decant and add aromatic water.

The author advocates putting the patient upon the use of inunctions as soon as an induration is made out. When inunctions are begun, they should be continued without a break. He has noticed that during the inunction treatment the patients are often unable to sleep at night. One of the first indications of the good effect of the mercury is an increase in body-weight, and, when the normal weight of the body is reached, or when the weight becomes stationary, there is no use in keeping up the inunctions for more than eight or ten times longer. After a course of inunctions, the potassium iodide should be given in small doses and for some time, to continue the good effect of the mercury. After a course of inunctions—say, eighty to one hundred—it is rare to have relapses, at least for a long time, or even for life.

Brief mention is made of mercurial baths, hypodermic injections of mercury, Zittmann's decoction, and the potassium iodide.

Syphilitic Infection of the Mother through the Fœtus.—The theory that the mother may be infected by a fœtus diseased through the semen of its father is regarded by Dr. C. Schadeck ("St. Petersb. med. Woch.," 1886, Nos. 16, 17) as merely an hypothesis founded upon conjectures and not upon convincing facts. A study of the published cases of this supposed mode of infection has shown him no absolute proof of the complete absence of the initial lesion in the mother. The *apparent* absence of the initial lesion might depend upon its hidden seat, as within the cervical canal, or upon its rapid course without subjective symptoms, as when located upon the *collum uteri.* He does not accept Hutchinson's theory of the gradual infection of the mother by the fœtus, as he believes it to be contrary to clinical experience in regard to syphilis, infection always taking place at once; and because, thus far, he has met with no convincing case in which any solid elements from the fœtus passed through the placenta into the maternal circulation.

The Treatment of Xanthelasma, Chronic Eczema of the Nostrils, Eczema of the Anus, Psoriasis, and Scabies.—Besnier ("Jour. de méd. et de chir.," April, 1886) has had good results in the treatment of *xanthelasma* from the administration of phosphorus in cod-liver oil, beginning with a dose of 1 milligramme of phosphorus per diem, and increasing the dosage one quarter of a milligramme a day till 3 milligrammes are taken. After using this for fifteen days he follows with turpentine.

In *chronic eczema* of the nostrils cod-liver oil is given during the winter and arsenic during other seasons. Locally he employs lukewarm water or water containing 7 to 15 grains of sulphate of copper to the pint, by the spray, morning and evening; and introduces pledgets of cotton covered with equal parts of diachylon ointment and olive-oil, or with a little yellow precipitate or boric acid.

Eczema of the anus is treated by frequent bathing with lukewarm water, and covering with starch or linseed-meal poultices and an impermeable tissue at night. To ease the itching after acute symptoms have passed, cocaine, 1 part to 100 parts of lard, is introduced into the anus. Withal a strict diet is to be maintained.

In the treatment of *psoriasis*, pyrogallic acid is given the preference over all applications. It is rubbed in and then bound on with flannel, the dressing being repeated every five days.

It is stated that the daily application of a 10-per-cent. ointment of β-naphthol will cure the *itch* in five or six days.

Artificial Alopecia Areata.—By section of the second cervical nerve peripherally from the ganglion, Dr. Max Joseph ("Ctrlbl. f. d. med. Wissenschft.," March 13, 1886) has succeeded in producing in cats and rabbits symptoms very similar to, if not identical with, those of *alopecia areata* as it occurs in man. This he did in five consecutive cases.

Carbuncle treated with Hypodermic Injections of Carbolic Acid.—Dr. Hayes ("Northwestern Lancet," May, 1886) has had excellent results from injecting a syringeful of the pure acid into the middle of the carbuncle and allowing through drainage by opening up the top of the carbuncle and applying a flaxseed poultice.

The Treatment of Erysipelas and Lymphangitis with Carbolic Acid.—Dr. Hofmokl, of Vienna ("Wien. med. Presse," March 14, 1886), has found a two- to five-per-cent solution of carbolic acid in water of great service in *erysipelas* and *lymphangitis*, whether they arise from an evident wounded surface or not. His manner of using the solution is as follows: The limb (for it is of most service when the erysipelas or the lymphangitis attacks the extremities) is first washed with soap and water, followed by alcohol. Then linen or gauze compresses are soaked in the solution, wrung out, and placed about the affected part, the compress extending for a hand-breadth beyond its margin. Over this an impermeable material is placed, and over this many layers of linen or cotton cloth are laid. The whole is confined by a bandage, and allowed to be in place for twenty-four to forty-eight hours. He always begins with a weak solution, increasing the strength when he learns the resistance of the patient to carbolic-acid poisoning. If any wound is present it is first to be covered with gutta-percha tissue, or a layer of zinc or boric acid ointment in order to avoid absorption. He has never had any bad consequences from this method, though he has met with passing carbolic-acid urine. In superficial erysipelas he has usually succeeded in stopping the process in a few days. If deep abscesses have formed, the superficial inflammation will be limited by this treatment to the neighborhood of the abscess, which can be opened and the dressing reapplied, and soon the whole trouble will be cured. This method is not suitable to erysipelas of the face, nor so well adapted to that of the trunk, as those regions do not allow of sufficiently exact bandaging.

This article is supplemented, in another issue of the same journal, by Dr. Konetschke, who describes his treatment of facial erysipelas. He uses a ten-per-cent. solution of carbolic acid in oil, which is rubbed gently but firmly into the diseased part and beyond. If the disease affects the scalp, the hair is to be opened up about the area and the oil rubbed in. The applications are to be repeated every hour. A cure is effected in two days or less.

Lichen.—Under the heading "*Lichen*" an attempt is made by Dr. Émile Vidal ("Ann. de dermatol. et de syphilig.," March, 1886) to overthrow the teachings of the Vienna school and the nomenclature adopted by the dermatologists of Germany, England, and the United States. Dr. Vidal's lichen includes papular eczema, pruritus senilis seu cutaneos, and the prurigo of Hebra—diseases to us so distinct that we wonder he did not also place in the category all the other papular diseases. But he regards lichen pilaris as a species of xeroderma; lichen scrofulosorum as an affection of the pilo-sebaceous system; and lichen ruber acuminatus et planus as a disease of entirely separate character. For him there are two main divisions of lichen—viz., 1. Simple lichen; 2. Polymorphous lichen. Lichen simplex may be acute or chronic, and either form may be general or partial. It corresponds to what we understand as acute and chronic papular eczema, having the same essential lesion, the same seats of predilection, the same tendency to form patches, to suffer relapses, to form vesicles when irritated, and to be attended with a thickening of the skin. His "lichen polymorphe" has two varieties: 1. L. polymorphe mitis; 2. L. polymorphe ferox. The first corresponds in ætiology and course to that form of chronic eczema so commonly met with in grocers, washerwomen, and the like, where there is a dry, cracked, more or less papulated condition of the skin of the wrists, forearms, and hands. The second—l. polymorphe ferox—is, as he acknowledges, identical with the prurigo of Hebra.

In the treatment of *acute lichen* he gives valerian, musk, and castoreum, and has seen the administration of a drachm of tincture of musk relieve the intense pruritus. In the chronic forms of lichen he mainly relies upon arsenate of sodium for internal use. The *external treatment* of *acute lichen* simplex consists in baths of agreeable temperature, lasting ten to fifteen minutes, and medicated with one or two pints of vinegar, followed by powdering the skin. In *chronic lichen* he anoints the parts two or three times a day with an ointment composed of

℞ Glycerole of starch	20 parts,
Tartaric acid	1 part,

which may cause some smarting for a few minutes but is soon followed by great ease. In circumscribed chronic eczema, as of the genitals and anus, he uses five parts of oil of cade to thirty of glycerole of starch, and gradually increases the strength till equal parts are employed. If itching is very intense, he has found two-and-a-half to five-per-cent. lotions of chloral hydrate or one-per-cent. lotions of chloroform afford great relief. In *prurigo* he has had the best results from protecting the parts from scratching by the use of an adhesive plaster composed of

Lead plaster made with cod-liver oil	600 parts;
Yellow wax	250 "
Cod-liver oil	350 "
Starch	20 "
Water, sufficient to dissolve the starch.	

This he has found useful in all obstinate forms of lichen.

Miscellany.

The American Neurological Association will hold its annual meeting at the Howland House, Long Branch, on Wednesday, Thursday, and Friday, July 21st, 22d, and 23d. There will be two daily sessions, one from 10 A. M. to 1 P. M. and one from 3 to 5 P. M. A number of interesting papers have been announced.

The American Rhinological Association will hold its fourth annual meeting at St. Louis on Wednesday, October 6, 1886.

Newspaper Medicine.—According to one of the daily papers, the procedure of sewing up lacerated intestines is laparotomy.

THERAPEUTICAL NOTES.

Drees's Solution of Albuminate of Iron in the Treatment of Circular Ulcer of the Stomach.—This solution, termed *liquor ferri albuminati* (Drees), is made by a pharmacist of that name at Bentheim in Hannover. It contains five per cent. of sesquioxide of iron, and is said to be absolutely free from acid, from any tendency to induce coagulation or undergo precipitation in the stomach, and from any injurious action on the teeth. To adults it is given in doses of half a teaspoonful or a teaspoonful, three times a day, and the first-mentioned is given to children over five years old. Dr. te Gempt ("Berlin. klin. Woch.," 1886, No. 15; "Ctrlbl. f. d. ges. Therap.," June, 1886) has used it in a number of cases of circular ulcer of the stomach, and with the most satisfactory results. With its use he conjoins that of Carlsbad salts and the dietetic measures recommended by von Ziemssen, and avoids recourse to narcotics except occasionally. The vomiting of blood is speedily checked by the iron solution, its long-continued use produces no inconvenience, and it promotes the appetite.

Iodide of Potassium in the Treatment of Infantile Broncho-pneumonia.—Dr. Zinnis, of Athens ("Arch. di Pat. Inf.," May, 1886; "Rev. des mal. de l'enfance," June, 1886), has been employing this drug for nearly ten years, with most satisfactory results. He states that it is most useful in the early stage of primary broncho-pneumonia, and in the case of well-nourished children between the ages of one and five. It acts more rapidly in the subacute than in the acute form of the disease. When given in doses of from eight to twenty grains, dissolved in three ounces of water, it lowers the temperature within two or three days, reduces the frequency of the respiration, and assists the expulsion of mucus, while a marked improvement in the local condition will be noted. If this effect is not obtained within three days after beginning the use of the drug, it is useless to continue it. Zinnis regards the iodide as a true specific in broncho-pneumonia.

Papayotin in Lesions of the Tongue.—Schwimmer, of Budapesth ("Wiener med. Woch.," Nos. 9–11, 1886), speaks highly of the use of local applications of a five- to ten-per-cent. solution of this drug in certain affections of the tongue. Twenty-five cases of leukoplakia buccalis are also mentioned as having been successfully treated. The drug rapidly dissolves the old epithelium and favors the formation of a fresh layer. The following solution was used:

Papayotin	8 to 16 grains;
Glycerin, Distilled water, each	75 minims.

The writer directs that the affected surface be carefully dried and then painted from two to six times a day with a camel's-hair brush.

The Internal Administration of Chrysarobin in Infantile Eczema.—Stocquart ("Monatsch. f. prakt. Dermat.," Jan., 1886) reports a number of cases of eczema in children, all of which were treated with small doses of chrysarobin, from a thirtieth to a tenth of a grain, or even a grain, being administered daily. The periods of cure did not exceed ten days. Theoretically, the drug is supposed to exercise a constricting action upon the capillaries of the skin.

Salicylic-Acid Ointments for Eczema of the Scalp.—The "Union médicale" for June 20th gives the following formulæ:

(1)	Salicylic acid	9 grains;
	Tincture of benzoin	20 drops;
	Vaseline	1 ounce.
(2)	Salicylic acid	1 part;
	Starch, Oxide of zinc, each	15 parts;
	Vaseline	30 "

Salicylic Acid in the Treatment of Glycosuria.—The "Brit. Med. Jour." for May 1, 1866, contains an article by Dr. Holden, in which he reports six cases of "rheumatic" glycosuria in which the administration of fifteen-grain doses of salicylic acid, thrice daily, was followed by a rapid disappearance of sugar from the urine, no change being made in the patient's diet. When tried in four other cases, in which rheumatic symptoms were absent, the drug had no effect. He recommends the following combination:

Salicylic acid	2 drachms:
Bicarbonate of sodium	1 drachm;
Carbonate of ammonium	1 "
Water	1 ounce.

Mix thoroughly, and, after effervescence has ceased, add water up to twelve ounces. Dose, an ounce to an ounce and a half three times daily.

The Antiseptic Action of Vinegar in Diphtheria.—Engelmann ("Ctrlbl. f. klin. Med.," 1886, No. 14) speaks highly of local applications of vinegar, which he uses as a gargle (diluted one half), in spray, or on a brush, one part to four of water. He regards vinegar as a more reliable germicide than a five-per-cent. solution of carbolic acid, while it is cheaper and more agreeable as a gargle, being devoid of the irritating properties of carbolic acid.

Chloride of Methyl in the Treatment of Neuralgia and other Painful Affections.—Tenneson ("Rev. des sciences médicales," Jan., 1886) has used the methyl spray in a large number of cases with marked success. Among the reported cures are those of ten cases of sciatica and sixteen of rheumatism, while in several instances the pain of pleurisy, pneumonia, and pulmonary phthisis was relieved. In order to avoid local irritation, he directs that the spray shall not be applied to one spot for more than five or six seconds.

Ethoxycaffeine.—The "Union pharm." for April, 1886, describes this new substitution-derivative of caffeine. It is isolated in the form of crystalline needles, which are insoluble in water, but slightly soluble in alcohol and in ether. It not only acts as a nervous sedative, but possesses marked narcotic properties. In doses of four grains, it relieves migraine and facial neuralgia, while eight grains have a hypnotic effect. When administered together with hydrochlorate of cocaine, it is less likely to irritate the stomach.

Theine as a Local Anæsthetic.—Castle ("Cincinnati Lancet and Clinic," February 6, 1886), following the directions of M. Mays, has employed hypodermic injections of theine for the relief of neuralgia with marked success. Partial anæsthesia of the cornea and conjunctiva follows its instillation into the eye. Dr. Castle injects hypodermically from a sixth to a quarter of a grain of the drug in the neighborhood of the painful spot. The skin at the point of puncture becomes somewhat congested and loses its sensibility. Subsequently there is slight mental excitement, which may persist for several hours.

A Lotion for Alopecia Areata.—The late Dr. Tilbury Fox is credited by the "Union médicale" with the following formula:

Tincture of nux vomica	4 drachms;
Tincture of cantharidis, Glycerin, each	2½ "
Acetic acid	4 "
Rose water	6 ounces.

Santonate of Atropine.—Bombelon ("Pharm. Zeitung," April; "Pharm. Journal," May, 1886) recommends highly this new mydriatic, which is said to be absolutely non-irritating, its action resembling that of homatropine, one drop of a 1-to-2,000 solution causing dilatation of the pupil, which persists for nearly twenty-four hours.

A Liniment for Neuralgia.—Guéneau de Mussy (*Ibid.*, June 19, 1886) recommends this lotion:

Essence of mint	5 drachms;
Tincture of aconite	2½ "
Chloroform	1¼ "

Shake thoroughly, and apply to the painful spot on a piece of flannel.

A Disinfecting Powder.—Sigmund (*Ibid.*, June 12, 1886) suggests the following:

Beech-tar or oil of cade	5 to 8 drachms;
Powdered sulphate of lime	7 ounces.

Mix thoroughly, dry, and pulverize. Recommended as a suitable dressing for sloughing wounds and syphilitic ulcers.

Original Communications.

MODERN ADULTERATIONS IN FOODS, AND THEIR RELATIONS TO DISEASE.*

By E. H. BARTLEY, M. D.,

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The time was when God sent meat and the devil sent cooks; but I am constrained to believe that his Satanic majesty is no longer satisfied with the damage to be done by bad cooking, and has started a market.

The seeds of much mischief to our bodily health are undoubtedly contained in modern foods. Adulterations in food products are very common in these days, some of which are harmless and allowable, while some are positively dangerous. Until within a very few years there was so much sensationalism and unscientific statement about these matters that one could not afford to believe half that was told. Within the last ten, or even five, years a great change has taken place. Instead of leaving such investigations to the secular press, scientific men have been called to take up the work of investigation, and place our knowledge upon a scientific basis. Chemists have been liberally paid to devise new adulterations, and chemists have been employed to follow their track to correct the results. The whole realm of the science has been ransacked for means of cheapening and substituting foods on the one hand, and the skill of the analyst has been applied, on the other, to their detection and prevention when necessary.

This condition of affairs must continue as long as competition is a prominent element in trade. The popular sentiment, too, is undergoing a marked change in regard to substitutes for old forms of foods. It is, with a great many intelligent persons, no longer regarded as a crime to sell lard as butter, stained and polished coffee for what it is not, corn flour for wheat flour, water for milk, or goat meat for mutton. These are regarded as merely tricks of trade. The word *adulteration* is too harsh a term to their ears, and they prefer to call them *substitutes.*

As physicians, we are only concerned with injurious adulterations. Of the great variety of adulterants in use, but a small number are to be regarded as injurious, most of them being only fraudulent. We do not, of course, advocate the practice of fraud in a matter so vital as our daily bread; but we must leave that part of the subject to the boards of trade and the general public. But, when these adulterations can be shown to have an injurious effect upon the health of any who are likely to partake of them, we are bound to speak with no uncertain sound. Nor should we be content to leave this to the health officials entirely, but it should be a part of the duty of every physician to impart to these authorities any information that will assist them in detecting and prosecuting deleterious frauds of this kind. In considering the subject of injurious adulterations, we should be governed by the following rules:

1. The public health is made up of the health of individuals, some of whom are in good physical condition, while others are the victims of various disorders. The invalids of the community are our especial care, and must be as carefully protected from injury as the most robust.

2. Any adulteration which can work harm to any class of persons in a community should not be permitted to be sold as food in that community. That is, by way of explanation, provided that the food so adulterated is, when in the natural unadulterated state, a fit food for such class of persons. Thus corned-beef and cabbage might work harm to young children, and yet be a fit food for healthy adults, who are most likely to eat of it. If the same article is preserved with boric acid, it may work harm to a certain class of persons who think themselves healthy. Such an adulteration should be prohibited.

3. A substance may be a useful medicament in certain pathological conditions for a limited time, and yet, when taken for a long time, may prove very injurious. The very fact that a substance has a decided physiological action renders it unfit for a food to be used for an indefinite period. The continued stimulation of any organ or function sooner or later leads to diseased action. A food must, therefore, have no specific physiological action upon any one organ, or set of organs, especially if it is a staple article, often eaten.

4. A substance which is foreign to the human body, and can not be burned up or transformed into a substance which is natural to the body, is to be regarded with suspicion until it is shown that it is without any appreciable action upon the digestive or excretory organs. The kidneys and liver are the chief excretory organs. These organs will not long endure overwork without becoming diseased. It is a recognized fact that congestion and inflammation of both these organs are due in many cases to overwork and irritation from foreign bodies; in short, from unnatural stimulation. Dickinson, speaking of the causes of nephritis, says:

> The blood is charged with material excessive in quantity, or unnatural in quality, which these glands take upon themselves to remove. Their own proper elements of secretion are poured upon them in sudden and excessive amount, or matter is thrown upon them which is foreign to their usual habit. As a consequence of overwork, or of work to which they are not adapted, they take on a turbulent and abnormal activity. They become congested, the tubes get choked up with epithelial growths, and the disease is established.

Among the causes of nephritis we must include certain substances taken into the body, which act as renal irritants —such as turpentine, alcohol, mercury, lead, arsenic, phosphorus, boric acid, potassium chlorate, cantharides, carbolic acid, and some other aromatic bodies which are not oxidized in the body. Among these substances the one especially deserving of mention is alcohol, not because it is the most irritant, but because, from its very wide-spread use, it is more frequently applied than any other. I think it is well understood that alcoholic beverages cause certain well-marked degenerations when taken in considerable quantities for a long time.

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* Read before the Brooklyn Pathological Society, January 28, 1886.

The most frequent changes are fatty infiltration of the liver, gastric catarrh, or chronic gastritis with mammillation of the stomach and occasionally fibroid thickening of the walls, cirrhosis of the liver, and induration of the kidneys.

The effects seem to vary somewhat with the character of the beverage used. For example, in Vienna, among beer drinkers, it is said that fatty changes are more frequent than in northern European countries, where spirits are more commonly used. There is a prevailing opinion, based upon good, though not conclusive, evidence, that the modern artificial beverages are more disastrous than the natural products of a generation ago. It is admitted by beer drinkers that one can not endure the American beers so well as the best imported brands. The difference in the effects of pure apple whisky and those of the modern article known as whisky is not in the alcohol they contain. Alcohol has the same effect wherever found; but it is the adventitious substances that make one pleasant and the other disagreeable, that make the one a simple stimulant and the other a poisonous potion. So much sensationalism and uncurbed imagination has been let loose upon this subject that we are sometimes at a loss to sift out the few grains of wheat from this chaff. It can be stated with safety that artificially prepared alcoholic beverages are very common among both the native and imported brands.

In some cases nothing can be said against these artificial drinks on sanitary grounds, for they are made from alcohol very carefully deprived of its fusel-oil, and from even the peculiar flavor which would reveal its origin. This is a necessity, as otherwise connoisseurs would be able to detect the fraud. Alcohol is sometimes added to weak wines to *fortify* them. A recent reliable authority upon the subject enumerates eighteen different coloring agents and twenty-five flavoring agents, besides five mineral substances used by wine manufacturers to prepare wines for the market. This book is written for the trade and not for the public, so that we are justified in taking the directions as tolerably reliable.

The same authority says: "Pure French brandy is indeed an article unattainable by the small consumer."* He says: "An excess of burnt sugar is introduced into the spirit, followed by sundry portions of cayenne pepper, grains of paradise, horse-radish, acetic ether, etc."† It would be impossible to follow out the details of this subject. It has been determined by Dujardin-Beaumetz that the toxic action of alcohol is greatly increased by impurities; so that an inferior brandy has a lethal action nearly one half greater than the best ethylic alcohol. The experiments of B. W. Richardson, Eulenburg, Rabuteau, and Furst agree in assigning very poisonous qualities to fusel-oil as an adulterant of alcoholic drinks. As to the action of the various ethers of amylic alcohol (fusel-oil) so generally used in the manufacture of artificial drinks, we have but few data; but it is stated on good authority that their action is injurious. We should not think of recommending amyl nitrite (one of these ethers) as a drink, even in very minute quantities.

What shall we say of turpentine, alum, copper sulphate, lead acetate, and tannic acid, occasionally met with, or the large number of coloring agents in every-day use in coloring wines, and the long list of other agents used? Sickness, in the form of vomiting, has frequently come to my notice from partaking of artificially flavored drinks, undoubtedly due to the ethers used.

How much of the injury to dram drinkers is done by these added substances it is impossible to say. We are all familiar with the fact that those who indulge in cheaper and more adulterated drinks of this class suffer more than those who drink only such as are known to be pure.

Lager beer has become almost a national beverage. Some of the breweries are sending out from 800 to 1,000 kegs of beer a day, and this is no exceptional city in this respect. There are manufactured and sold in this city each year, exclusive of what is brought in from other places, about 1,350,000 barrels, or over 41,800,000 gallons, of ale and beer. This quantity is distributed among 700,000 people, at the rate of 60 gallons *per capita* per annum. The importance of keeping this beverage pure and wholesome, and free from injurious adulterations of any kind, is self-evident.

Recent investigations, conducted by myself to determine the character of the beer manufactured and sold in this city, have shown that, although many of the extravagant statements of sensationalists are not borne out, there have grown up in recent years certain practices which must be regarded as harmful to the health of beer drinkers.

A perfectly pure solution of extract of malt, dextrin, maltose, and extractive matters, containing a small percentage of alcohol, can not be regarded as injurious to health when taken in reasonable quantities. When, however, this liquid is allowed to contain a constant though small quantity of copper, zinc, and in some cases lead, as proved by my investigations, and when there are numbers of men and women who drink from twenty to one hundred glasses a day, even these small quantities of these metals become matters of great importance, especially to those persons whose kidneys are defective from disease or overloaded with effete materials. Suppose a pair of kidneys and a liver have to pass through them but two or three grains of copper and zinc daily, except on special occasions. We must remember that these metals, while not very poisonous, are abnormal substances to the habit of the kidneys, and somewhat irritating; that this action, though slight for a single day, is kept up for a number of days—yea, for the years of a life-time. How much of the gastric catarrh and renal and hepatic troubles seen in beer drinkers may be due to these contaminations? The probabilities are too strong to allow us to pass them by with unconcern. This is not all. Competition has compelled brewers to turn out very large quantities of beer in order to make it pay to do business on the small margins allowed. This, again, necessitates either an enormous storing capacity and great outlay of capital, or some means of shortening the time of manufacture.

An examination into this subject revealed the fact that in one of the very popular breweries, sending out about six hundred kegs daily in hot weather, the total storing capacity would only allow of a storage of twenty-nine days when every cask was kept full, which is seldom the case. The object of keeping the lager in the resting-vats for three to four or even six months, as was formerly done, and is still done in Bavaria, is to allow the beer to clear itself of yeast, etc., by settling.

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* "The Brewer and Distiller," p. 166.

† *Loc. cit.*

In order to get the beer out in as short a time as two or even three weeks after the completion of the fermentation, it is necessary to use clearing agents. The substances used very generally for this purpose are isinglass, Iceland moss, gelatin, tannin, cream of tartar, etc. Gelatin or isinglass seems to be the most commonly used. A solution is made in water with the assistance of cream of tartar or tartaric acid. This is poured into the casks and stirred. The tannic acid of the hops unites with the gelatin and carries down the floating particles of yeast and other causes of turbidity. Sometimes the beer is first treated with tannin, and then gelatin in larger quantity, so as to clear it very quickly.

The addition of the cream of tartar or tartaric acid renders the beer strongly acid. This makes it necessary to add bicarbonate of sodium, to neutralize the acid and remove the sharp taste. This is done at the time the beer is put into the keg, just before sending it out. Another object of this bicarbonate of sodium is to give the beer a bead. Another cause of acidity is in certain acid fermentations which frequently take place after the alcoholic fermentation. This may be due to lack of cleanliness in the brewery or to the want of a sufficiently low temperature in the storing cellars tô keep the beer. The addition of gelatin makes the fluid especially subject to these foreign fermentations, such as the lactic, butyric, and mucic fermentations, which occasionally give the brewers much trouble and require the addition of certain antiseptics. The anti-fermentatives found in breweries visited were principally salicylic acid and calcium bisulphite. These foreign fermentations, when well established in a brewery, require the services of the "beer doctor" to eradicate them. He is a recognized necessity, who, by the use of various antiseptics and flavoring substances, "doctors" up a spoiled brew and makes salable what would otherwise have to be thrown away.

These antiseptics are not added in sufficient quantity to kill the ferment, but are only inhibitory. These ferments, when taken into the stomach, have been shown by Pettenkofer to produce gastric and intestinal disturbances, sometimes of a very severe character. The action is akin to that of slightly soured milk. This same fault is occasionally met with in beer containing floating yeast, which the imperfect clearing process has not removed.

All foreign authorities agree that beers which have developed these foreign fermentations, as well as those containing floating yeast, are injurious to the health of those consuming them, and consequently in some parts of Germany it is forbidden to sell them. The use of antiseptics and disguises to make such beer salable is a punishable offense. To control this matter, in Bavaria at least, governmental inspectors are maintained, and the breweries as well as the beer of the markets are kept under supervision. Such inspection is needed in this country at the present time. The presence of the butyric and putrefactive ferments in a brewery are manifested by a peculiar odor to be detected by an expert on going into the cellars. In one brewery visited by me last summer I detected this odor on entering the cellar. In this same brewery very large quantities of bicarbonate of sodium were being added to the beer—at least two ounces to the keg, containing one hundred glasses, or about 9·5 grains to the glass. In other breweries the quantity used varied from half an ounce to an ounce and three fourths to the keg by actual weight.

It will be seen that a man who habitually drinks twenty glasses of beer daily—not an unusual allowance for some drinkers—would take one hundred and ninety grains of the bicarbonate. It must be remembered, however, that a large portion of the bicarbonate is decomposed before being taken into the stomach; but in eight samples, from as many different breweries, an excess of the bicarbonate was found in each sample. It was observed that men drinking freely of lager beer thus treated habitually passed alkaline, turbid urine. In regard to the use of the alkaline salts Brunton says: "The excessive use of alkalies or their carbonates is injurious, and their employment to reduce obesity may, unless carefully watched, be followed by serious consequences." That the excessive use of alkaline carbonates may derange the digestive organs is well known.

The effect of these large doses of salts of sodium, when continued for a long time, may possibly be injurious to the kidneys, if for no other reason, because of the necessity of their eliminating large quantities of the alkaline carbonate. The stomach refuses food, and the health is consequently impaired by this excessive amount of alkalies. Add to this the disturbing action of imperfectly finished and clarified beers, and a small amount of injurious metals, and we may ask ourselves why modern beer ever agrees with any one.

I must not leave this subject without remarking that some brewers in Brooklyn and New York prepare a beverage that is comparatively free from these objections. Bottled beers are, as a rule, better than those sold over the counter, and are not treated with sodium bicarbonate. The facts here stated show the necessity of a frequent inspection and constant sanitary control of modern breweries as the only way of regulating the quality of lager beer.

Among injurious adulterations of food we may mention the addition of red lead, chromate of lead, arsenite of copper, Martin's yellow, vermilion, arsenical fuchsin, and "fusel-oil" to confectionery, nearly all of which practices have been detected in this city. The coloring of vermicelli and pastry with chromate of lead is equally reprehensible. At least one case of lead poisoning in New York was traced to this cause.

The practice of coloring pickles, peas, etc., with copper received a severe blow last June by the death of a girl of seven years, from a pickle colored with sulphate of copper, two days after the Department of Health of this city had prohibited the sale of "greened" pickles.

The sale of head-cheese and Bologna sausage made from stale, unsalable meat, treated with borax and saltpetre and then colored with Venetian red or fuchsin (aniline red), furnishes another example of the fertility of "Yankee ingenuity" in furnishing food for the human race.

Scarcely less interesting is the practice, recently discovered, of polishing and coloring inferior grades of coffee to make them resemble the more desirable brands. The colors used for this purpose are nearly all the ordinary cheap pigments, such as ochre, umber, Venetian red, animal black, Prussian blue, indigo, French chalk (soap-stone), chrome yellow, one sample of which was loaded with arsenic, arsenite of copper, etc. These and similar metallic and poisonous adulterations need no discussion or comment to fix their place in relation to the question of health.

The only question worthy of even a passing consideration is that of the quantity of these various ingredients used. It sometimes happens that physicians are unguarded enough to admit that, because the quantity used is less than a medicinal dose of copper, lead, tin, zinc, arsenic, or chromium, as the case may be, it can not be harmful. In the case of lead or mercury, which are cumulative poisons, it would be admitted that more than mere traces would be dangerous in the course of time. In the case of arsenic, renal inflammation has been induced by living in a room whose walls were covered with a paper colored with arsenite of copper. In other instances obstinate conjunctivitis, bronchitis, and even diarrhœa leading to fatal results have occurred from arsenic obtained from the same source. In the case of copper, tin, zinc, and other metals, less is known definitely. It is certain, however, that large doses of these metals are irritants to delicate tissues, and no one of us would like to prescribe one-grain doses of any one of them to be taken for a life-time. Yet in the greening of preserved vegetables larger doses of copper than this are provided. In some canned tomatoes examined in the laboratory of the Brooklyn Health Department last year, over three grains of tin were found in each two-pound can. The fact that these metals are abnormal to our food, that they have irritant properties upon the kidneys, and that there are many cases of latent nephritis in every community which may be injured by even slight irritants, are sufficient causes to prohibit even very small doses of these metals in articles of every-day consumption.

As before stated, any substance which has a distinct physiological action which makes it of value as a medicine must necessarily make it dangerous as a food to be used indefinitely, for long-continued stimulation of any organ or set of organs will sooner or later derange the functions of the organ or organs.

In this connection we may refer to another subject which has not received the attention from the profession that it deserves. I refer to the use of preservatives. Most of the new preservatives in the market depend for their preservative action upon boric or salicylic acid, either free or in combination. Both of these acids are capable of decidedly irritative action upon the kidneys, and probably also upon the liver.

Boric acid has caused death by absorption from the lower bowel when used as an injection; and also by absorption from a wound in the thigh, where it was used as a surgical dressing. In both cases the post-mortem appearances were intense congestion of the liver and kidneys. Suppression of urine preceded death. Salicylic acid is also sometimes known to cause considerable irritation of the kidneys during its elimination. I have known of at least two cases where this remedy produced an attack of acute nephritis when administered for rheumatism. In one case, where it was self-administered for three years for chronic rheumatism, the patient died of chronic Bright's disease, probably as a result of the remedy, though not positively. The fatal malady was contracted during the period when the salicylate of sodium was used.

So prominent is this effect of the salicylates, that it is a remedy to be used with great caution in post-scarlatinal and post-diphtheritic rheumatism. Salicylic acid, like a number of the other substances of the aromatic series of coal-tar compounds, is not wholly burned up in the body, but is excreted as salicylate of sodium in the urine, and thus exerts its irritant action upon the kidneys. The long-continued administration, therefore, of either the borates or the salicylates is to be avoided.

The much-vaunted "rex magnus," "preservaline," "boro-glyceride," "fruitaline," etc., all contain one or other of these agents. They are recommended and used to preserve meats, milk, fruits, and various articles of food.

About two years ago a certain brand of milk in this city, which had the indorsement of a number of the leading physicians and divines, was found to contain about ninety grains to the quart of the mixture known as rex magnus—composed of boric acid, borax, and common salt. Salicylic acid is now frequently used to preserve canned fruits. It is not the effect of a small medicinal dose that we here object to, but we do object to being fed upon these substances ourselves, or to have those members of the community fed upon them whose kidneys and livers are already in a state of chronic irritation, congestion, or inflammation, with lessened secreting power.

So much has been said and printed upon the subject of milk as a carrier of disease that I hesitate to add to it here. I will, however, endeavor to give a *résumé* of the present knowledge upon certain points not so often discussed. That milk can take up and convey specific morbific matter can not be questioned. In 1883 Mr. Ernest Hart, in a paper read before an English social science congress, gave particulars of eighty-two epidemics, due to infected milk, occurring between 1873 and 1883. Of these, fifty-three were of typhoid fever, seventeen of scarlatina, and twelve of diphtheria. The whole number of cases of disease traced to this source were:

Typhoid fever..............	3,500,	with 400 deaths;
Scarlatina..................	800,	" 120 "
Diphtheria..................	700,	" 60 "
Total..................	5,000,	with 580 deaths.

These were only such epidemics as had been positively traced to the milk. Will any one pretend to say how many epidemics, or how many individual cases, were never investigated or traced to their proper source?

Epidemics of measles, small-pox, and diarrhœal diseases have been caused by the milk supply. All disorders due to filth and polluted waters may be, and frequently are, driven from door to door and sold for seven cents a quart.

Some years ago a number of cases of sickness resembling typhoid fever were traced to a stable in the upper part of New York city. An inspection of the cows showed one of them to be sick. Her milk, on examination, was found to contain pus. The suppression of this milk resulted in the complete cessation of the sickness. An inflamed and suppurating udder may give a milk which will sicken those who partake of it. The danger of milk being specifically infected with contagious epizoötic diseases is not so great as might be expected, from the fact that in most of these diseases, especially in the acute stage, the secretion of milk is greatly lessened or suppressed. The only two diseases of this class in which the milk usually continues to be secreted are pleuro-pneumonia and foot-and-mouth disease. The first of these has not been communicated to the human subject, but a disease similar to the latter has been communicated by the milk. The question whether the milk from tuberculous cows can communicate this disease has been much debated within recent years. In ninety-one experiments with feeding the milk of tuberculous cows to different kinds of domesticated animals, 30·7 per cent. of the animals contracted the disease. It is stated by Stang and others that they have seen the accidental production of the disease in children from drinking warm milk from tuberculous cows.

Without dwelling upon the recorded experiments and reported cases, it seems to be pretty well established that tuberculosis is a communicable disease, and can be produced in a large number of cases, in the lower animals at least, by the ingestion of tuberculous flesh, sputa, or milk. Although there are a few reported cases of the transmission of the disease to children by the same method, this can not be regarded as positively settled, but the conviction that it can be thus transmitted is almost irresistible.

I am prepared to believe that many cases are acquired through tuberculous food in families where heredity is out of the question. For example, in one family coming under my notice, five children died with tuberculosis, when for four generations a death had not occurred from this cause. There is no allegation, however, that the food or milk was the cause. Experiments prove that the flesh of tuberculous animals is more infectious than the milk. Toussaint found that tubercular lung substance from cows was infectious after roasting in the usual way. Klebs and Ballinger state that boiling does not always destroy the infectious qualities of tuberculous milk.

The question opened up by these statements and experiments is too far-reaching to be entered into here, but it is one of vital importance to us all. Tuberculosis is a common disease among stabled cows. Professor Law says that in certain herds that supply New York city with milk (and the same applies to Brooklyn), 20, 30, and even 50 per cent. are affected with this disease. Not only do we use the milk of these cows, but, sooner or later, we consume most of them as beef. During the year that is just past there were seized in the abattoirs of Brooklyn thirty-one carcasses of beef in which this disease was so pronounced that there could be no question that the meat was totally unfit for use, while one hundred and five showing pleuro-pneumonia were seized. No less a quantity than 86,000 pounds, or forty-three tons, of meats unfit for human food was seized in 1885 in this city. Add to this a considerable amount that escaped detection, and we can form a faint idea of the diseased and unwholesome meat sent to market every year.

It is important to know, if possible, in relation to the wholesomeness of the milk of a certain dairy, not only the health of the animals and their surroundings as to cleanliness, ventilation, etc., but their food, their care, and the purity of the water used to wash the cans or add to the milk.

A sour fermenting food renders the milk acid and indigestible. Distillery waste and brewers' grains are notable examples of this, both of which produce acid milk. I have been able to detect the milk of swill-fed cows by its composition and physical properties, and have traced two deaths directly to such milk. How many deaths in young children have not been traced to this their true cause no one will ever know. How many cases of convulsions or serious illness among children under our care are a form of milk poisoning caused by the milk of cows in heat, overheated and excited cows, or other disturbing causes in the milk, will never be known, and will never be under control.

But we must hasten to speak of another subject of great importance. I refer to what, for a better name, we may call *food poisoning*. Every now and again we meet with cases where some food has caused severe illness in a number of persons, characterized by vomiting, diarrhœa, burning or colicky pain, great prostration of the vital powers, cold extremities, feeble, sometimes slow and sometimes rapid, pulse, and occasionally a scarlatina-like eruption, convulsions, or death. Occasionally, also, there is a metallic taste in the mouth, with partial paralysis of one or more of the extremities. In most cases the prominent symptoms are vomiting, colicky pain, prostration, and diarrhœa. In certain cases the cause of the sickness may be in indiscretion or peculiar idiosyncrasy of the person, while in others it is in some change in the food eaten. Among the indiscretions often leading to such sickness we may mention those most likely to occur. First and foremost, my observation has shown overeating of one dish to be a common cause of such attacks. For example, a servant girl, when questioned in relation to her sickness from eating ice-cream, said: "I know it was the cream, for I ate nothing else for dinner. I ate all I could, and then went out for the afternoon." It was a very hot day and she got quite warm during the afternoon, was out in the sunshine a great deal, and returned home sick at evening. Who wonders at it? In another case a child ate six to eight ounces of taffy-candy in a half-hour, and was made sick.

In other cases a meal has been made upon a meat-pie, or, perhaps, a dish of chowder or salad, at eleven or twelve o'clock at night. A can of fruit or vegetables is bought for a meal, and little or nothing else eaten. A greened pickle is eaten, at bed-time, by a child of six or seven and a doctor's bill, a suit for damages, or a funeral is the result.

The results are likely to be more severe if the dish is a very indigestible one, or if it is taken immediately before or after a period of great emotion, as of great joy, anger, or sorrow. I have met with such a case, where three members of one family ate an ordinary meal, consisting of bread, butter, and cold boiled beef, immediately before attending the funeral of a relative. After returning from the funeral they were all taken sick, and vomited the meal undigested. Others who had eaten of the same articles were not affected.

There are, however, cases of undoubted poisoning due to changes in the food eaten. Thus cucumbers and melons, when not fresh, are apt to bring on diarrhœa and vomiting. There seems to be a tendency to develop a purgative substance in all vegetables of the *Cucurbitaceæ* family, to which the cucumber and melon belong. Tomatoes, bananas, and many green fruits have a similar tendency. Commencing decomposition in animal and vegetable food is liable to develop poisonous principles. Meat which has been kept until it is tender or *high*, and fish that has become tainted, are apt to produce symptoms of poisoning. Until very recent years we have been at a loss to explain these phenomena, but the subject has recently excited a great deal of attention. The results of study and experiment have conclusively shown that proteid substances, while undergoing spontaneous putrefactive changes under the influence of certain low organisms, may develop alkaloidal poisons of the most virulent nature. The poisons formed by the decomposition of such bodies as fibrin, albumin, gelatin, etc., vary with the decomposing body, the organisms causing the decomposition, the temperature, the conditions as to atmospheric contact, and the time which the decomposition has consumed. Some products of the decomposition of proteid bodies are innocuous, while others are more or less poisonous; among the latter there are great variations of activity.

When the decomposition has just begun, there are few of the poisonous alkaloids produced; afterward, they are abundant, and still later they are decomposed and disappear. As a result of the growth of putrefactive bacteria upon animal flesh, the very poisonous alkaloid, neurine, is produced. Apparently, the same organisms, when sown upon fish, produce a different alkaloid, closely allied to neurine, and called muscarine. Neither the time nor place permits me to follow out the description of the various alkaloids found by various observers. They are called collectively ptomaines, or cadaveric alkaloids.

The most marked and uniform symptoms produced by neurine and muscarine are salivation, diarrhœa and vomiting, dyspnœa, paralysis, and death. They also stimulate the flow of tears and the secretion of bronchial mucus. They usually make the pulse slow and weak, but do not arrest the heart's pulsations. Atropine exercises a marked antidotal action to these poisons, checking the salivation, diarrhœa, and dyspnœa, and, unless the dose is very large, prevents death. Choline, another alkaloid resembling the foregoing, but much more feeble in its action, may be prepared from bile or yolk of egg by boiling with barium hydrate.

In some cases of poisoning by fish, cheese, or sausage, the symptoms are so much like those of belladonna poisoning that they suggest the presence of an alkaloid having the physiological properties of atropine. We are all familiar with the excessive dryness of the throat, languor, drowsiness, and scarlet eruption of some of these cases. Paralysis of accommodation, ptosis, etc., have also been observed to exist for a number of days after sausage poisoning.

Dr. T. Lauder Brunton has suggested the use of physostigma in cases showing these symptoms, atropine in those indicating muscarine or neurine, and perhaps morphine in other cases. In general, treat the most prominent symptoms.

In view of the extraordinary activity of these alkaloids, we can easily understand why tainted meat or fish may produce the violent attacks which we sometimes see. This may explain why some persons can not eat eggs without being poisoned by them. Choline is so easily developed from the lecithin which the yolk contains, that some peculiar condition of the digestion probably develops this poison.

But we must not lose sight of one fact of importance here. It is well known that the putrefactive process is going on, more or less, in the living body, and ptomaines make their appearance in the fæces and urine. Any new additions to this process, such as swallowing food swarming with these low organisms, may so increase the process that a poisonous dose of alkaloids may be generated in the intestinal canal.

In other words, we should distinguish between the effects of putrefactive organisms within the body and those of their by-products prepared without the body. In many cases thorough cooking, in my opinion, would prevent the food from doing any serious damage. In fact, I see no other explanation of the occurrence of so few cases of poisoning from tainted meats. There are many families who make a practice of allowing their meats to become slightly decomposed before cooking, and yet accidents are comparatively rare—a fact which seems to show that cooking is a protection, and because it kills the organisms. In my experience but few cases of poisoning occur from recently and thoroughly cooked food. I have known whole families to be poisoned by a beef-stew, or by corned beef which had been cooked for a number of days and then left in the same vessel. Meats protected from the free supply of air are more likely to become poisonous than those freely exposed. Meat-pies, imperfectly preserved canned foods, canned foods left in the can a few hours or over night after opening, meat-stews left in the pot or vessel in which they were cooked, are liable to cause poisonous symptoms.

It is probable that the organisms are more active when cultivated with a limited supply of air—a fact insisted upon by Pasteur in the case of certain pathogenic bacteria. Again, free exposure to air destroys some of the poisons by slow oxidation. All canned foods should be carefully examined before they are prepared for the table. A putrefactive or foreign odor, a decided change from the normal in color or taste, or an escape of gas on puncturing the can, should condemn it.

The use of a poor grade of gelatin in ice-cream and other pastry is becoming very general. I am of the opinion that great caution should be exercised in its use, as it is capable of doing harm. Putrefaction is easily set up in a mixture of gelatin and other food. For example, a mixture of milk and gelatin becomes an excellent medium for the cultivation of bacteria. In one case coming under my immediate notice, cream that had been melted down and then refrozen caused sickness in a number of persons in a family who ate of it. The melted cream had a putrid taint, and contained gelatin.

There is little doubt that this is the explanation of some of the cases of ice-cream poisoning occasionally met with. The danger above referred to must be much greater in liquid or semi-liquid foods than when it is used in solid foods, because they putrefy more easily. Much of the gelatin used has a decided putrid odor, as sold in the markets, and on this account this process starts very quickly in solutions of it. Further experience and more knowledge is necessary before we can decide upon the advisability of recommending the use of gelatin as a substitute for eggs unless we can insure the quality of gelatin used.

If the hints and suggestions here offered have succeeded in interesting you in a subject of growing importance, one too often neglected by physicians, if I have stimulated in some a desire to inquire into the quality of food foisted upon the public, and if I have shown the importance of a more careful attention to the food of our patients in health and disease, and awakened in you a desire to drive the bad from the markets, substituting for it that which is wholesome as well as good to look at, I shall be amply repaid for this effort.

A NEW TRAPPING-FIXTURE
FOR
SEALING DRAIN-PIPES AND LOCKING OUT SEWER GASES.

By W. D. SCHUYLER, M.D.

As a contribution to preventive medicine, I would bring to the notice of the profession a newly devised cut-off and locking trap-valve for automatically closing the upper ends of drain-pipes with a durable metallic seal and preventing the entrance of sewer gas through water fixtures.

The need for more reliable trapping than has been heretofore attainable is indicated by a very generally felt distrust of the various devices now in vogue for excluding sewer gas, and also by the more urgent indication—the prevention of avoidable disease. That a general and growing distrust exists with regard to the action of present trapping appliances there can be no doubt. A livelier interest is manifested than formerly with regard to the presence of sewer gas; the adoption of improved and inexpensive trapping appliances; attempts to provide better ventilation for rooms where water fixtures are placed; the removal of fixtures to remote portions of the house, placing them out of the house proper in an annex; the use of germicides and the more recently adopted system of roof ventilating pipes in connection with house drainage—are various expedients either for excluding or for annulling the action of sewer-gas poisons that afford ample testimony to such growing distrust. Besides, it is generally admitted by those familiar with the subject—architects, sanitary engineers, and plumbers—that the trapping devices in general use at the present time are *not reliable.* This distrust, combined with a developing right appreciation of the injurious effects of habitually breathing an atmosphere polluted by sewer gas, is at length manifesting itself in a very decided manner with respect to the retention and erection of water fixtures requiring drain-pipe connection with the sewers. Many, acting on the belief that these drain-pipes leading from the sewers to the interior of houses as at present trapped are dangerous beyond remedy, are removing all fixtures requiring them that can be dispensed with, or, leaving them, are cutting out and sealing up the drain-pipes, preferring to dispose of waste water in some less convenient way rather than assume the risk of sewer-gas poisoning that such pipes entail. Others, building or fitting up anew, are leaving out many fixtures heretofore deemed indispensable, especially the stationary basin in bedrooms and the bath-tub and water-closet in rooms adjoining, in fact, are putting in as few fixtures throughout as possible, and placing such as they must have as far removed from the sleeping rooms and the more frequented portions of the house as they can, where escaping gas can be more readily got rid of, or will do least harm.

The plan of lessening the number of fixtures put in to overcome the effects of imperfect trapping is now being very generally adopted, especially in the construction of first-class apartments and private dwellings. The belief that water fixtures as at present trapped are dangerous, and the action taken in consequence, justify the opinion that, unless a better trapping is provided, the use of such fixtures in the house will soon be almost if not entirely discontinued. An abolition of conveniently placed water fixtures, by which an abundant supply of hot and cold water may be provided, would work most unfortunate results. It would entail inconveniences and loss of time, and would render an increased service necessary; would diminish the amount of water used for special and general purposes, and so far contribute to personal and general uncleanliness; and, what is most important from a sanitary point of view, would lessen the amount of waste water going to promote necessary sewerage.

For the sanitary removal of rapidly accumulating organic *débris* by sewerage too much water can not be provided. In fact, the sewers should be supplied with running water, in sufficient volume to keep them constantly flushed, in order that the *débris* may be at once washed away. On the other hand, any considerable diminution of water for that purpose, resulting from its lessened use, would favor such accumulations of decomposing matters in the near vicinity of houses as very soon would work serious harm.

Society is learning, from the occurrence of fatal and prolonged epidemics where sewerage is not provided or is imperfect, the value of good sewerage, and as to the sanitary value of private and public cleanliness, that is generally admitted. Hence, water being the necessary requisite for these important objects, its provision in ample supply and its free and abundant use constitute a prime requirement of a healthful environment.

There is no scarcity of water in nature, and, as it is constantly flowing past us from the highlands and the surrounding country into the sea, a wisely directed sanitary economy should aim to divert it in abundance to the needs of social life. Such necessary and abundant supply of water should be secured by every community, and then its free use encouraged and provided for by the erection in our homes of numerous conveniently placed and adequately trapped stationary fixtures.

But of equal importance with regard to a sanitary environment is a pure atmosphere, and, as the atmosphere of city homes especially is more likely to be rendered impure by sewer gases that enter through the necessary drain-pipes of water fixtures than by any other cause, the question of preserving a pure house atmosphere in connection with a provision for an abundant use of water is one of the highest importance and, judging from the attention it has received, one heretofore not readily solved.

The sewers are always pervaded by a noxious atmosphere that is largely made up of injurious gases, derived from decomposing, putrescent organic matter, which tend to escape upward and outward. That the sewers are always pervaded more or less by injurious gases there can be little doubt. If they were properly constructed and adequately flushed with running water, little or no organic matter would be left to decompose in them, and comparatively small amounts of sewer gas could then develop to constitute an element of their atmosphere. But, as sewers are generally constructed too large to promote successful flushing by such limited volume of water as is provided or results from general use, with rough walls that catch and detain sewage material rather than accelerate its removal, with but little and in some places no drainage-pitch, organic matters are not at once removed, but remain throughout, and in many places form cess-pools of fermenting masses from which gases are everywhere given off, and with which the sewers become filled.

The character and noxious quality of sewer gas vary possibly at times after a series of heavy rain-falls and consequent thorough washing of the sewers; or, after they have been well ventilated by favorable conditions of the atmosphere or by favorable winds, gases may not exist in them in sufficient quantity to become concentrated or very unwholesome; but generally, and in the absence of favorable conditions—when for a long time there has been no considerable rain-fall and the sewers have become clogged with decomposing materials, when specific disease-germs are generated in and pervade the sewer atmosphere, or when there is old saturation from leaky basement-drains or from imperfectly emptied cess-pools—the amount and variety of gas generated and the multiform combinations which it undergoes are likely to give it great density and to impart to it a very poisonous character.

The natural tendency of gases generated and aggregated in sewers, as elsewhere, is to escape, and they are most likely to pass upward through connecting drain-pipes, where such are inadequately trapped, into houses and pervade the atmosphere. The position of the house relative to the sewer, the higher temperature and the greater comparative rarity of its atmosphere, the direct communication between the house and the sewer atmospheres afforded by connecting pipes, predispose to its escape into the house rather than in any other direction. Furthermore, when conditions in the sewers are favorable for a rapid evolution of gases, when they contain large amounts of organic *débris*, and conditions of heat and moisture favor their rapid decomposition, then their rapid evolution may result in pressure; and, when the usual vents for its escape are closed—as in winter by ice, snow, and other accumulations—and when the house temperature is kept comparatively high, creating inward suction, then the gases, acted upon by pressure from below and by suction from above, tend to enter the house with no little force.

Although the degree of pressure in general exerted by gases in the sewers must be slight, yet, when a normally existing pressure is increased by a rapid development and aggregation of gases, and, furthermore, by inblowing winds or rising tides setting back in the sewer mouths, it may become a strongly acting force.

Is the habitual breathing of sewer gases pervading the house atmosphere harmful? General belief declares that it is. Notwithstanding this verdict, however, it is very doubtful—judging from the indifference manifested with regard to imperfect fixtures that allow sewer gas to escape, from the general submission manifested toward imperfect and badly constructed drainage, and from the general acceptance of an insufficient water supply—whether such harm is rightly and duly estimated by people in general.

That the profession is not unmindful of the morbific effects of breathing an atmosphere tainted with sewer gas I can not question; and, did I not, nevertheless, feel that its practical recognition of this agent as a factor of disease evinced an underestimate of its true importance, I should not say more relative to it. But, believing that, owing to the influence of certain causes, namely, the comparatively large degree of out-of-door life general in this city, the capacity of some constitutions, apparently, to withstand the effects of sewer gas, the lack of general and uniform morbid results from this cause, and an absence of all prominent morbid results for varying periods of time, a very natural and prevailing tendency with all to underrate the true significance and results of familiar evils,* and a strong tendency, on account of similarity of symptoms, to impute the effects of sewer gas to general malaria, swamp-miasm—causes that either antagonize or to a degree mask its effects—a kind of apathy or tolerance exists in the professional mind, as with people in general, relative to the essential action and significance of this already wide-spread but growing evil as a predisposing or exciting cause of disease, I shall not pass it over, but dwell somewhat upon it.

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* "Increase in the relative mortality from diphtheria, . . . which shows its greatest fatality in the colder months, is, probably, dependent in the majority of cases largely upon faults of house building, drainage, plumbing, etc., which are but little affected by public sanitary improvements. . . . With strange inconsistency, a single death from the rarest of all diseases—hydrophobia—will set a whole people agog, and arouse an insensate crusade of extermination against healthy dogs at any cost, while the very people who are foremost in such prophylactic panic apathetically close their eyes to the many thousands of deaths occurring annually from easily preventable maladies" (editorial quotation, "New York Medical Journal," March 27, 1886, from a report by Dr. Carroll, until lately secretary of the New York State Board of Health). This "aptly sets forth that diphtheria is one result of bad drainage and plumbing; and that an unwarrantable apathy naturally results with regard to this agent, it being a familiar evil."

So far as I am aware, no scientifically differentiated data as to the influence of sewer gas as a cause of disease have been arrived at, and probably, except by concerted clinical investigation, carried on through a somewhat extended period of time, and possibly not with absolute certainty, even then, can it be judicially settled. I am informed that the Board of Health of this city has endeavored to determine its morbid ætiological effects through inquiry and investigation by its visiting staff. From the constantly varying conditions and potencies of sewer gases, resulting from varying conditions of waste, temperature, evolution, and ventilation, and from the complexity of ætiological factors in general that may combine to produce results in special cases, it is evident that a reliable estimate as to the specific causation of the former *must rest upon evidence taken at the bedside*, and differentiated with a full appreciation of the therapeutical indications involved. Hence any judgment based upon less responsible evidence, such as could be procured by a visiting board, can not be accepted as final or conclusive for present use.

Occasionally public as well as private and professional opinions strongly assert that prevalent endemic, epidemic, or frequently occurring diseases are due to this cause. Then, again, and often during considerable periods of time, when sewer gases would seem to be equally present and should be equally harmful, little or nothing is said with regard to their injurious effects. The fact that for long periods but little epidemic or other sickness occurs that is referred to sewer gases does not necessarily prove that they are not essentially harmful. The absence of recognized morbid results from such cause during an extended period may be accounted for by a less virulent character or a less concentrated condition of gases during such period, by such conditions of atmosphere as favor their more rapid and complete diffusion, by more thorough flushing and sewerage which has taken place; or, again, such temporary negative results may be due to the antidotal effects of a greater degree of life in the open air during such time.

That recently discharged excreta or other organic matter in an early stage of decomposition does not exhale very injurious gases general experience proves, but that very poisonous effluvia are given off from the matter that is long delayed, becomes stale, and undergoes active fermentative and putrefactive changes, and especially from old cess-pools, is, on the other hand, equally accepted. Furthermore, that, under certain conditions of evolution, combination, and concentration, these gases may become very virulent, even deadly, in their action, is shown by their effect upon the sense of smell, and by the suffocation and sudden death sometimes occasioned by even a momentary inhalation of them. Therefore, varying amounts and conditions of organic waste, of sewerage, temperature, winds, and barometer, greater or less amounts of rain-fall, and varying character and concentration of gases, may constitute adequate causes to account for varying morbid effects during certain seasons from this cause. But, notwithstanding the fact that during certain periods the apparent effects of sewer gas are so slight as to encourage the belief by many that they are comparatively innocuous, yet, during certain other seasons—as, for instance, during the winter of 1882–'83—their results, specifically and in general, are so very decided and characteristic that there is no mistaking their nature and injurious action.

In the absence, then, of more definite data, we must determine as to the causative importance of sewer gas in the production of disease by the evidence of general facts and of individual experience. In general we may with confidence refer to the more frequent occurrence of certain diseases and classes of ailment, such as occasion disproportionate physical, and especially nervous, prostration, and such as manifest periodic tendencies to this cause.

Individually I have met in practice with acute and subacute pharyngitis, with amygdalitis, and sporadically occurring diphtheria recurring in the same apartments; with irregularly exacerbating malignant remittent fever in children; with periodically occurring subacute and acute ephemeral fevers, attended with disproportional prostration and excessive periodic neuralgic pains in adults; with periodic sciaticas, infra- and supra-orbital neuralgias, and myalgias; with daily morning headache, depressed functional conditions, deranged nutrition, malaise, and debility, the recurrence of which I have been obliged to trace to local causes, which, carefully differentiated, indicated sewer gas as the offending agent. I have attended cases of puerperal (peritoneal) fever, remittent in character (in which normal lochia and the absence of an adequate local inflammatory temperature excluded septicæmia as the cause), that developed in patients occupying rooms, and sleeping in them for months before, that contained stationary basins the conditions of which afforded sufficient evidence of an unsanitary condition, which, finally and only yielding to a treatment indicated by a malarial cause, afforded corroborative testimony as to their zymotic character and their origin in sewer gases.

At present I am treating a case of typho-malarial fever, one of several very similar in character I have had in my charge the past season, in which the exacerbations occur daily or oftener, are attended with pronounced chills or shiverings, with fever, severe shifting, general and local neuralgic pains, violent palpitations, severe headache, mainly supra-orbital, malaise, and marked asthenia (these symptoms abating with each remission), that developed with malaise, shiverings, neuralgic pains in the chest, back, and limbs, anorexia, morning headache and debility, since the patient has resided in a quite recently built apartment-house situated in a healthy locality, and done her own work in a kitchen that contains two stationary tubs and an ordinary pan sink, and into which opens the door of a water-closet that accommodates the occupants of a double apartment, this closet being one of five discharging its contents into the same soil-pipe. The fact that the general surroundings of this house are what may be considered sanitary excludes general malaria as the cause of her fever; and that the patient was in her usual health when she moved into the apartment months before excludes the action of extraneous and previously contracted causes; while the presence of a foul odor always perceived on entering the hall-way and ascending the stairs; the presence of the water fixtures and the closet, not free from an unpleasant odor, in the kitchen mentioned, where she spent most of her time; the markedly nervous and depressed character of her symptoms, their irregular periodicity and degree of expression, and, finally, the curative results of an anti-malarial treatment—strongly indicate for the disease (1) a local causation, which (2) undoubtedly was sewer gas.

Besides the more pronounced maladies that may result from inhaling an atmosphere polluted with sewer gas, there can be no question that such functional troubles as morning headache in some cases, dull pain in the back, general physical depression, anorexia, periodic malaise, an inability many experience to perform prolonged mental work, and disordered states of the secretory and excretory functions, result from this now very prevalent cause. Furthermore, the habitual breathing of an atmosphere tainted with sewer gas especially depresses nervous tone and leads to an impairment of the respiratory, secretory, and nutritive functions, which, with the greater or lesser degree of blood-poisoning that concurs, creates strong predisposing tendencies to disease, that at length is thereby more easily excited by other causes.

There is no question in the mind of the writer that the frequent occurrence of pneumonia in certain seasons, notably as it occurred with great fatality in the winter and spring of 1882 and 1883, is often due to depressed nervous and physical tone resulting from this cause. Again, besides being in itself deleterious and a cause of disease, a sewer atmosphere may be the cause of disseminating the contagia of specific maladies. Nothing is more probable than that the poison of typhoid fever and cholera, which develop and multiply in the excreta of affected individuals, when discharged into the sewers, should there become propagated, and at length escape upward through drain-pipes and communicate those diseases. Only by this mode of dissemination can we account for the simultaneous outbreak of those maladies at points distant from each other, when a single though perfectly isolated case of either has occurred at some other point to afford the necessary contagium; and nothing can be more natural than that small-pox, scarlet fever, and also other like diseases, should be spread from a case affording the specific poison to upper floors in apartment houses through defectively trapped soil- and drain-pipes. If to the foregoing consideration relative to the actual disease, malaise, and debility caused by sewer gas, we add the evidence of general rumor as to the sickness resulting from "malaria" in the city, and the fact that such contagious diseases as cholera and yellow fever are most persistent and fatal in the presence of filth and putrefying emanations (notice reports as to the sanitary conditions of the district most invaded and where the disease was most fatal in Toulon, France, by the former, and as to the condition of sewer drainage in Memphis, Tenn., prior to and during the outbreak of the latter in the autumn of 1884), we may with reason conclude that, as a cause of disease in large cities and in country places where cess-pools are allowed to form and remain, sewer gas is second in importance to no other influence or agent. Furthermore, I believe it is a safe assertion to make, that—in cities and throughout densely populated districts where refuse and decomposing organic matter is removed by sewers, and water fixtures are connected with these canals by imperfectly trapped drain-pipes, and especially in the older built-up districts and in the houses drained and plumbed some years ago—sewer malaria influences very largely the occurrence, character, progress, and results of all constitutional diseases occurring therein.

Indeed, there is no doubt that the emanations, gaseous and liquid, resulting from organic waste of human origin, as it is generally and improvidently disposed of, giving rise to malaria in cities and poisoning drinking water in country places, comprise the most prolific cause of disease operative in social life at the present time. Therefore, and on account of its continuance and increase with our developing population, a wiser disposition of this waste and an efficient protection from its injurious effects are of the first importance as regards economic and sanitary matters, and they should receive attention accordingly. Economically, all organic *débris* should not be drained into the sea to be lost for long periods, but properly treated and returned to the soil from whence they were derived, there to be reformed into nutritive products. And sanitarily, and in all cases, whatever disposition is made of this matter, the atmosphere which we breathe and the water which we drink should be protected from pollution by its presence.

With regard to sewer gases, as the term is understood to include, we must not overlook the fact that they do not arise wholly from sewers, but are largely generated within the area of the house drainage. Indeed, it is more than probable that most of the malaria suffered from in the city houses results from this source. Within the house, sewer gas may arise and escape in two ways:

From *without* the pipes, from the foul soakings of leaky basement drains, from leaks in the course of the soil- or drain-pipes, or from saturation about fixtures, occurring from continuous drippings. There are few soil-pipes so securely jointed that they will hold water, although they are specified to do so. In fact, it is very difficult to join the several segments of iron soil-pipes so that they will not leak. Bad air, therefore, may continually escape from soil-pipes where imperfect joints are made. This defect of soil-piping is not generally recognized, but it is a matter of great importance and should receive attention, especially as it is capable of remedy. When sewer gas arises from saturation external to basement drains, or when it escapes from badly connected soil-pipes, it is likely to enter the cellar and be drawn up from thence through furnace flues directly into the living and sleeping rooms, and thus pervade the entire house.

The other source of sewer malaria is *within* the house-pipes, whence it escapes into the house through the imperfectly trapped upper ends of drain- and soil-pipes. Gases generated in the sewers and within the house system equally escape at this point. If imperfectly trapped, therefore, owing to the extent of its source, the amount of gas that may enter the house at this point is great.

The means for the prevention of gases arising or escaping from the first source is simply mechanical—a matter of putting in good, reliable, and reliably jointed basement drainage, and equally reliably jointed soil-pipes. Reliable drainage piping, especially soil piping, from a sanitary point of view, comprises the most important feature of house-building, and should be put in at whatever cost of money and labor it may require. Reliable drainage being afforded, then the preventive treatment of sewer gas is a matter simply of thorough trapping. Therefore I hold that it is fair to assume that any conveniently operated and practical device that will accomplish a thorough trap-closure of these pipes at their upper ends, and perfectly exclude sewer gas in connection with water fixtures, and thereby provide for a necessary use of water and the preservation of a pure atmosphere in rooms where fixtures are placed, *must prove a valuable contribution to preventive medicine.*

The requirements for a necessary use of water are twofold—namely, first, its adequate supply furnished with the required elevation pressure, and, second, numerous and conveniently placed fixtures for its use. And for the sanitary disposal of sewer gases that tend to escape thereby, the requisites are either their efficient antidotal or other treatment, so that they shall be rendered harmless, or, what is far safer, their entire exclusion by reliably acting trapping fixtures.

As the very important question of an increased water supply for the city is now under advisement, it seems not inopportune to suggest in this place that the true source to draw upon for our future as for our immediate needs is being singularly overlooked. While the Croton water-shed, so called, toward which all eyes seem at present to be turned, may, by various means of husbandry, afford a sufficient supply for our immediate wants, yet the true source to draw upon for an unlimited supply for present uses, as for the greater needs of a future increased population, is, without doubt, the Hudson River. The Hudson above Poughkeepsie, and upward for miles at a stretch, and between the inlets of Esopus and Saugerties (see the map of the United States Preliminary Survey of the river), is fed by and receives large accessions to its volume from innumerable springs that rise in its bottom. At some convenient point in this region of springs the supply should be taken. It could readily be pumped to the required elevation, then conducted by pipes to the upper end of the present aqueducts, and thence delivered throughout the city, through channels already built or being constructed, with comparatively little additional cost. The greater purity of the Hudson River water taken above Poughkeepsie over that collected on the Croton water-shed, drained through innumerable reservoirs of filth, can not be questioned; and, as to the greater reliability of an assured supply from the two sources, the former merits pre-eminent recognition over the latter.

Abundant pure water, with the necessary elevation and pressure to accommodate all, being provided, and the required number of conveniently placed fixtures scattered throughout our houses being put in, the question then arises: How shall we treat sewer gases that tend to escape through the latter? Shall we, for instance, allow them to escape and then trust to expelling them again into the open air? Shall we trust to their antidotal treatment by germicides in the drain- and soil-pipes before they escape, or shall we simply exclude them by reliable trapping?

(*To be concluded.*)

INSANITY IN THE COLORED RACE.

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In this nineteenth century, the age in which we proudly boast that civilization has reached its acme and men have almost perfected themselves in the sciences as well as in the modern improvements and conveniences of life, it is an unpleasant thought to consider that this higher development has brought in its train an alarming increase of insanity.

It is true that more thorough investigation and the more modern methods of caring for our insane have brought under observation many cases that were formerly kept concealed at the homes of the afflicted, and, in addition to this, our population is increasing rapidly, and it is logical that insanity should increase in a corresponding ratio. This fact partially accounts for the increase, but during the last twenty years the increase of insanity in this country is disproportionate to the increase in population. The increase of insanity over that of population is about twelve per cent.

Writers on this subject give several causes for this increase of insanity in the white race, chief among which are the large influx of foreigners, hereditary taint, intemperance, the education of the times, the great excitement and competition in the commercial world, and the change from a vigorous, well-balanced organization to an undue preponderance of the nervous temperament, which is gradually taking place in succeeding generations. Some of these hold good with the negro, but the two main causes, hereditary predisposition and immigration, must be excluded; and, as the increase in the case of the negro is equally as great, we must look for some other cause, especially since this rapid increase dates from his emancipation.

From information obtained by travelers in Africa, we learn that insanity among the natives is almost unknown, and we can safely say that there it is at its minimum. On being transplanted to this country, however, the negroes came under the influence of our civilization, and after a time we saw insanity cropping out among them, but, owing to their condition of servitude, they remained to a great degree on the same mental plane as their savage ancestors, and mental troubles were not much aggravated. On their emancipation every means was used to elevate them, and the influence of civilization was brought to bear on them in every possible way, and, as soon as this has had time to show its effects, we find them suffering from insanity in a greater degree than the whites. Statistics will bear me out in this statement, and any slave-owner will tell you that insanity among the negroes was a rare occurrence before the war.

The federal census reports a total of 638 insane negroes in 1850, and in 1860 the number had increased to only 766, or say one insane negro for every 5,799. Returns for 1870 show one to 2,695, and in 1880 we find one for every 1,096. If the same ratio is kept up, by 1890 we may expect to find the whites and colored with about the same ratio, which is one for each 500.

It seems that with his freedom the negro fell heir to several diseases that previously had been confined to the white race. Pneumonia has always been a frequent and fatal disease among negroes, but before their emancipation a full-blooded negro was never known to die of consumption. To-day the mortuary reports of any Southern city will show that phthisis is the greatest foe to the colored race. The negro is also susceptible to other diseases and epidemics that he formerly resisted and passed through with impunity. And in this connection let us speculate a little. Why is it that to-day thousands are suffering from diseases from which nature seems to have granted them immunity as a race before their emancipation? These diseases are just what they were thirty years ago; there has been no change in our climate or soil, and our white population are affected just as they always were.

Unquestionably, to my mind, these diseases are not traceable to any infecting agent, nor are they due to any climatic change, but are the results of a change in the negro himself, springing in the main from a complete revolution in his mode of life and habits. While the negro had a master he had no thought of the morrow; not a single care burdened his mind; there was nothing to disturb his equilibrium, and he was always the same fat, sleek, and contented individual, flourishing in the tropical Southern sun like a healthy plant indigenous to the soil. As a rule, he was well treated; had warm clothing; his diet, though plain, was wholesome and sufficient; he was comfortably, cleanly quartered, and not overcrowded; the foreman saw that his hours were regular, compelling him to retire early and rise by daylight. As a slave, his passions and animal instincts were kept in abeyance by the will of his master, and, through fear of punishment, he was compelled to observe the most rigid laws conducive to health and hygiene.

Contrast his condition to-day. Many suffer from actual want of daily necessities, consuming but little meat and fatty substances, other provisions likewise being often insufficient, their clothing thin, and their houses as a rule too small and filthy for comfort or health, one room in many instances sufficing for whole families, including children and dogs.

In the light of reason, then, what more could we expect than to find this unsanitary condition productive of great evils to health and morals?

In addition to this bad sanitary condition and other causes mentioned, the excitement incident to and dependent upon his sudden emancipation had much to do with bringing upon him these troubles that have marked his gradual deterioration. This sudden striking the shackles from his hands gave him not only freedom from the care and surveillance of his master, but it gave him liberty which he converted into license to violate and outrage all the natural and moral laws provided for his well-being. It seems but natural, however, that the negro, thus suddenly liberated, should want to taste of the sweets of freedom in every sense, and, like a glutton at a feast, we find him suffering from the reactionary effects of the too sudden revulsion.

From a quiet, peaceable being, he soon became a religious fanatic or a turbulent politician, often both combined, and, whirling in this vortex, night was turned into day with him; his nightly meetings continued until after midnight, and at these meetings all restraint was laid aside and his nervous organism strained to its utmost tension. His former love for his master was changed into hate for the whites, and his credulous mind was kept at its highest pitch by politicians inculcating the idea that white people wanted to put the blacks back into slavery, the poor dupes even being deluded with the idea of political preferment and social equality with the whites.

Their religion, lamentably lacking in the essentials of morality and rationality, is characterized as being very emotional, consisting of wild and hysterical shouting, singing, and dancing, and it is not an uncommon thing, when their minds are overwrought by this kind of excitement, for them, during these meetings, to go into the trance state. Voudouism also plays an important part in their religious worship, and they are victims of superstition to the utmost degree.

In a word, it is impossible to estimate the evils that intemperance has brought upon the negro, and it is an incontrovertible fact, sustained by the irresistible proofs of daily observations, that it has been one of his greatest curses. All observers agree that intemperance is intimately connected with and is one of the main exciting causes of insanity in all races, and this is especially true of the negro, and, as its evil effects are handed down to succeeding generations, we can but expect his progenitors to be heirs to alcoholism, idiocy, or hereditary insanity.

The negro is naturally intemperate, and, unrestrained, indulges every appetite too freely, whether for food, drink, tobacco, or sensual pleasures, and sometimes to such an extent as to appear more of a brute than human. The gratification of these appetites has enervated him, and, from leading an active and useful life, many have become indolent, lazy, trifling vagabonds, a curse to the country and a burden to the State.

It is remarkable, though, that while negroes are given to all forms of intemperance, but few use opium. I have never seen an opium-eater among them; they are afraid of narcotics and *cold pisen* in general.

As to the influence of civilization as a cause of insanity, Dr. Bucknill and Dr. Tuke say that insanity attains its maximum among civilized nations and remains at its minimum among savage nations, the unfavorable causes being the increased susceptibility of the emotions, the abuse of stimulants, overwork of the brain, especially in the young, and that condition of the lower classes which is a constant attendant upon civilization—the higher emotions or moral sentiments, the lower propensities and the intellectual faculties being subjected to an excitement unknown to savage tribes. Are not these remarks *apropos* when applied to the negro race? Then the mind of the negro is not susceptible of as high development as the white, owing, as some pathologists maintain, to the fact that the sutures close much earlier in the negro than in other races. In childhood negroes are bright, intelligent, and vivacious, and, as a rule, learn as fast as whites of the same age, but on the approach of adult life a gradual change is manifested. The intellect seems to become clouded; they grow unambitious and indolent, and, losing interest in their books, their advancement grows slower and finally ceases altogether. In the white race the volume of the brain grows with the expansion of the brain-pan, but in the case of the negro, on the contrary, the growth of the brain is arrested by the premature closing of the cranial sutures and the lateral pressure of the frontal bones.

This is an hereditary physical condition, and any sudden attempt to transform the negro mind by a system of enlightenment and culture so much at variance with his nature must not only prove futile, but is a source of actual harm to him, viewed from any standpoint. If this condition is true, then the structural and intellectual development must be gradual, and in consonance with the irrevocable laws of nature; and it can reach that degree of perfection attained by the white only after generations of development.

In studying the causes and types of insanity among the negroes, many striking peculiarities are met with, but I fail to find a single case exhibiting any of the marked characteristics of hereditary insanity; there may be some such cases, but the histories accompanying them are so meager and unsatisfactory as to incline me to the belief that hereditary taint plays no part in the course of the disease.

The insane negro is combative and homicidal, but suicidal tendencies rarely exist. Dementia and melancholia are common, but the most frequent forms met with can best be characterized as moral or emotional, fraught with hallucinations and delusions. The superstition and credulity of the negro render his untutored mind ripe for ideas and impressions calculated to dethrone his reason, and he falls an easy victim to fear, fright, rage, jealousy, ambition, religious fanaticism, political commotions, and all phases of undue excitement coincident with his surroundings.

Many cases have come under my observation of victims suffering under the delusion that they had been "tricked" to prevent the accomplishment of some object, and that this could never be consummated until the spell was broken on them. Many imagine they are God, Christ, or some other grand supernatural personage. One of the most violent patients we have ever had became maniacal on hearing that Mr. Cleveland had been elected President, and another cut his throat on receiving the same tidings. They had been told that their race would be deprived of the rights of citizenship and placed again in bondage on the election of a Democratic president; hence this sudden outburst of frenzy and despair which left their minds in total eclipse. I could cite numerous other instances, but deem these sufficient to properly illustrate some of the inevitable results of wrong ideas and false teachings with which the primitive-minded negro has been so thoroughly indoctrinated.

We can not, however, consider all insane who have no respect for our moral code. Negroes have but little regard for their marital obligations; virtue is almost unknown among them, and, as a result, their loose morals have spread the most loathsome diseases in their midst, with all the consequent evil results.

The prognosis of the insane with regard to the negro is rather more unfavorable than that of the whites. They are more liable to a recurrence of the disease, and the use of medicines is not followed by as beneficial results as in the case of the whites.

In brief, in the treatment of the various forms of insanity in the negro race, I have noticed that proper food, plenty of exercise, and rational modes of moral suasion are accompanied with better results, and do infinitely more good in the process of their amelioration and restoration to sanity than do all our medicines.

Below I append a table, taken from the census of 1880, showing the distribution of the colored insane and how cared for. These figures are not correct for this date, owing to the rapid increase of insanity, and, as some States have built new asylums during the last few years, more patients find places in the asylums. With a view to getting the table presented as nearly accurate as possible, I have written to several superintendents asking for the number of colored patients in their asylums. Some kindly responded with the desired information, while others gave no answer.

In this State our new asylum at Meridian gives accommodation to eighty colored patients, but we are still sadly in need of more accommodation for them. Many of our jails and poor-houses are full, and this applies to other States as well, since we observe that few Southern States provide for half their colored insane. This is a sad commentary on our Government. The negro is with us to stay; he is an acknowledged factor in the body politic, a part and parcel of our Government, and as a citizen and tax-payer he is entitled to all the benefits accruing from our eleemosynary institutions.

For my part I believe in segregation, and, when the number justifies it, each State should build separate asylums for the colored insane. I know from experience that it is bad management to mix them with the whites. While I was assistant physician in the Arkansas Asylum we were compelled to put the colored in the same ward with the whites, and it was next to impossible to keep them from constant turmoil. However insane, the whites still feel a repugnance toward the negro, especially when they have to eat in the same dining-room and use the same wash-basins and bath-tubs. And, thus situated, the surroundings of neither can be made homogeneous or satisfactory.

In this asylum we set aside two wards for colored patients, and some asylums have detached buildings for them, which is a much better plan, but I do not consider this quite so feasible in their treatment as separate management. In the airing courts and during out-door exercise they meet on an equality, and here, too, we find the same jealous feelings aroused by a contrast on the part of the two classes as to which is granted the most privileges, which is the better clothed or provided for, etc., which engenders bitter feelings, frequently resulting in open ruptures between the patients.

It is sincerely to be hoped that, while the world is undergoing such a remarkably beneficial revolution in regard to the proper care and treatment of our insane, the poor unfortunate colored ones will not be forgotten. They are our wards, their condition appeals to our sympathy and benefaction, and it behooves us to give them that care and attention which our modern civilization demands.

COLORED INSANE IN THE UNITED STATES; CENSUS OF 1880.

STATES.	Total.	No. in asylum.	STATES.	Total.	No. in asylum.
Alabama	411	88	Missouri	145	35
Arizona	19	2	Montana	2	1
Arkansas	160	53	Nebraska	4	1
California	135	33	Nevada	1	...
Connecticut	31	1	New Jersey	84	42
Dakota	3	1	New York	195	87
Delaware	48	..	North Carolina	437	144
Dist. of Columbia	124	99	Ohio	162	75
Florida	85	24	Oregon	19	1
Georgia	411	124	Pennsylvania	171	58
Illinois	76	19	Rhode Island	14	7
Indiana	68	16	South Carolina	461	148
Iowa	9	5	Tennessee	364	67
Kansas	39	8	Texas	306	107
Kentucky	345	257	Utah	2	...
Louisiana	404	305	Vermont	5	2
Maine	7	2	Virginia	692	412
Maryland	259	43	Washington Ter.	4	...
Massachusetts	42	26	West Virginia	37	20
Michigan	38	8	Wisconsin	9	5
Minnesota	5	1			
Mississippi	432	166	Total	6,165	2,493

THOMSEN'S DISEASE

AS AN INTERCURRENT SYMPTOM WITH

ANTERO-LATERAL SCLEROSIS;

A Brief Case Record.

By C. H. HUGHES, M. D.,
LECTURER ON NEUROLOGY IN THE ST. LOUIS MEDICAL COLLEGE.

On June 9th James F., from a town in southern Illinois, was referred to me with the following history and symptoms: Three years ago a frightened cow came running toward him, and, in attempting to jump over him, struck his uplifted right arm with such force as to cause him to fall violently to the ground. His arm struck against his head, and when he fell and struck the ground with his head he "felt a snap in the upper part of his spine." His left shoulder and a spot in the spinal column at about the second dorsal vertebra were very painful and tender for a long time after the accident. The temperature of the head and spinal surfaces was normal when I examined him.

About the first of last March his lower limbs had a sensation of coldness and his head became somewhat dizzy. His neck became stiff and was drawn to the left side for several weeks. His pulse became intermittent immediately after the accident, losing the seventh and fourteenth beats, and so continues at this time.

He began, also, just after the accident, to awaken once or twice during the night, though he would fall asleep again, and he would awaken earlier than usual in the morning and remain awake all day. This symptom I have noticed come on quite often in sclerosis, especially in disseminated cerebral sclerosis, and it is worthy of more attention as a symptomatic datum than it has received.

He has no fulgurant pains, but the tendon reflex in both patellar tendons is markedly exaggerated below the knee. He walks clumsily and requires a cane or the help of a friend to get along on his feet, and, on attempting to sit in a chair, when he gets within a few inches of the seat he drops into it precipitately. There are no abnormal sensations in the soles of his feet when he walks, as in tabes dorsalis. He gives no account or evidence of specific disease, antecedent or present. He has control over his bowels and bladder, but his bowels are habitually constipated. He has had œsophageal spasm in attempting to swallow, but is not now troubled in that way. He gets rigid all over in the morning when he first attempts to move to get up, and has to wait a while before he can accomplish any muscular movement. He usually succeeds after making a third attempt. He has no pain at these times, but, as he expresses it, everything all at once tightens in his muscles when he tries to move, and he has to wait till they get ready to let him use them. This is repeated every day. He also has fixed spasm without pain at other times, after the muscles have been long quiescent, on suddenly attempting motion, but not every day. The only daily phenomenon of this kind is in the early morning. He has no unconscious seizures. His appetite is fair. His urine is normal to albumin and sugar tests and to litmus. The eyes have been examined ophthalmoscopically, but nothing was elicited.

The patient's age is thirty-six years. He is an American by birth, without cerebro-spinal neuropathic heredity, and a farmer by occupation.

I have lately also seen Thomsenean contracture in a case of cerebellar disease with lateral movement of the sterno-mastoid, becoming rigid on the person suddenly attempting to move round or flex the head.

3000 CHESTNUT STREET, ST. LOUIS.

A CASE OF
DOUBLE VAGINA AND DOUBLE UTERUS.

By ALFRED C. PALMER, M. D.,
RICHMOND, VA.,

On May 25, 1885, I was called to see Mrs. S., aged twenty-three, who has been married two years. She had been suffering from pains in the back and lower part of the abdomen for the past year. In answer to questions propounded, I ascertained that she had menstruated at the age of fifteen, and had been regular up to a year previous to the time I first saw her. At this period she had miscarried after two months' pregnancy, since which time she had suffered from pains during menstruation, which now lasted from eight to ten days, and were followed by leucorrhœa. Upon making my first examination I found an almost healthy uterus, and was surprised that my patient complained of so much discomfort. I made an application to the cervical canal, and advised vaginal injections of warm water. At my next visit, upon introducing a bivalve speculum, an entirely different condition of things presented itself. Here was a uterus considerably engorged, with the cervix slightly lacerated, and emitting a very tenacious discharge, indicating considerable cervico-endometritis. Much astonished at the apparent change in the appearance of the parts, I withdrew the bivalve, and introduced a Sims's speculum for further examination. Upon retracting the perinæum, there came into view an almost healthy uterus, which I recognized as the one seen at my first visit. Further investigation disclosed what appeared to be an opening in the wall of the vagina, immediately inside of the external orifice, which presented the appearance of an excavation produced by an ulcer that had entirely healed. Introducing my finger to explore the depth of this excavation, I found that it passed up without difficulty, feeling the blade of my speculum through a rather thick membranous partition. Further inserting my finger, I distinctly felt an os uteri, at the same time having another fully in sight, disclosed by the speculum. The diagnosis was easy. With the assistance of my friend Dr. George Ross, at my next visit a more thorough examination was made. We discovered two perfectly formed vaginæ, with a partition about three lines in thickness entirely separating them. This partition began between the two necks of the uteri, and passed downward to the external vaginal orifice, the rugæ being perfect upon its sides. The uteri lay in a lateral position, miscarriage having occurred in the one upon the right side from the appearances presented. Introducing a probe, we found the two entirely distinct, the one upon the left measuring one inch and three quarters, the right two inches and a quarter in depth. Subsequent investigation showed that menstruation took place in both at the same time, continuing a little longer in the right.

Book Notices.

Diseases of the Tongue. By Henry T. Butlin, F. R. C. S., Assistant Surgeon and Demonstrator of Practical Surgery and Diseases of the Larynx, St. Bartholomew's Hospital, etc. Illustrated with Chromo-lithographs and Engravings. Philadelphia: Lea Brothers & Co., 1885. Pp. viii–451.

The author informs us in his preface that "for years he has made use of the opportunities which the large out-patient department of St. Bartholomew's Hospital has afforded in studying and making drawings of disease of the tongue," and that this volume is the outcome of his experience in this subject. Diseases of the tongue are treated of in twenty-four chapters as follows: After some introductory remarks in which the plan of the work is explained, he begins in Chapter I with the consideration of accidents to the tongue. Then follow those on congenital defects, discoloration of the tongue, inflammation of the substance of the tongue, eruptions on the tongue, indentations, excoriations, furrows and fissures of this organ, ulcers of the tongue, patches and plaques, nodes and nodules, smooth patches and smooth tongues, atrophy, hypertrophy, cysts of the tongue, cysts under the tongue and salivary calculus, innocent tumors, cancer, treatment of cancer of the tongue by operation, causes of death after removal of the tongue, after-treatment of operations, the choice of an operation, later operations on the lymphatic glands, later operations for recurrent disease, palliative treatment, parasitic affections, and an appendix containing a list of works and papers referring to the subjects treated of in the book.

In each of these chapters the subject is thoroughly considered, and that in a very practical manner. To mention all that is worthy of remark would far exceed the bounds of this notice. The consideration of tumors of this organ occupies more space than that of any other of the subjects treated of. In regard to malignant disease, the author calls attention to the pre-cancerous stage, and insists that any condition of the tongue liable to degenerate into malignant disease should receive early attention, and that all substances irritating to the mucous membrane should be avoided. Smoking, provided it causes any irritation, should be prohibited. He states that if there is one thing more harmful than another in the treatment of simple indolent ulcers of the mouth, it is the application of strong caustic. He points out the fact of the liability of tubercle, warty growths, or a simple indolent sore to be gradually transformed into cancer, and lays down the rule that "*for all chronic ulcers which have existed for some time, especially for those having indurated bases, and which occur on the border of the tongue, for all indolent sores which form in the area of leucoma, for all warty growths which develop on the dorsum of the tongue in the midst of similar diseased areas, the rule of treatment must be imperative. Every source of irritation must be sought for and removed, and the diseased tissue must be eradicated if it does not speedily improve under treatment.*" The operative treatment of cancer of the tongue is well considered, and the details of the management of the stump, on which depends the success of the operation, are carefully laid down. Twenty-four excellent colored lithographs, illustrating the diseased condition of the organ, have been added, which much increase the value of the book.

Mr. Butlin has written a work of great merit, and the book is a valuable addition to surgical literature.

Cancer. A Study of Three Hundred and Ninety-seven Cases of Cancer of the Female Breast, with Clinical Observations. By Willard Parker, M. D. New York: G. P. Putnam's Sons, 1885. Pp. 61.

Why this great surgeon, eminent as a teacher no less than as an operator, and remarkable for acuteness of observation and clearness of expression, left no memorials in the shape of volumes relating to his experience and observation upon surgical subjects has never been quite explained. Perhaps the busy portion of his life, extending as it did over more than half a century, was unfavorable to the calm habits of thought and investigation which are so necessary for a writer of books; and yet there must have been another reason, for, without multiplying examples, an equally busy *confrère* and contemporary, Gross, has left a systematic work on surgery which is a monument of accuracy and comprehensiveness.

This publication upon cancer is a modest work—only sixty-one pages in length, with a statistical table added which is as concise and as useful as anything upon the subject which was ever published. Dr. Parker was a clinician, purely and simply, and, while he did not fail to appreciate the great value of minute investigation upon the subject of cancer, he realized, as all men of large experience must, that important generalizations and practical deductions in regard to cancer must be made by the study of the disease in and upon the individual. With some of the author's deductions we can not entirely agree; for example, he says that cancer is most prevalent among people who live generously, especially among those who eat an abundance of animal food; he cites its absence, or comparative absence, among savage and semi-civilized tribes and nations, the North American Indians, for example, and its frequency among others, such as the Chinese. In regard to the first of these statements, certainly it is within the experience of many surgeons that the poor, the under-fed, and the hard-working among their patients—hospital patients usually—suffer far more from this disease than those who are well-to-do. North American Indians are notoriously meat-eaters, if we may be allowed to differ with the author, and the Chinese are not; and yet, according to his statement, the former do not suffer from cancer, while the latter do. We are willing, however, to admit that errors of diet may form an important factor in the causation of the disease, and that careful dietetic regulation has an important bearing in its preventive and curative treatment. The author's experience led him to think that the question of heredity as an element of causation was not so important as had been supposed; in fact, that it might "be ruled out almost wholly."

Notwithstanding this, it is very evident, from a study of the table, that the predisposition of some individuals—and we might enlarge the statement by adding, of some temperaments, of some races, in certain areas of territory and climate—is very decided toward the development of cancer, while in other individuals the system shows great resisting power. Thus recurrence quickly followed many of the operations which are recorded in the table, the disease becoming diffused—as if stimulated by the effect of the operation—while in others extirpation was followed by quiescence for ten, twenty, or even thirty years. Finally, the propriety of early removal of the disease as thoroughly as possible is not to be discussed, because it is accepted as an axiom. Subsequently, the main thing will be to alter the patient's constitution as far as possible by appropriate treatment.

Brief as this brochure is, it opens an enormous field for discussion, which, of course, is not to be entered upon at this time. For those who are interested in the study of cancer, the table of statistics will give most valuable information, and many will desire the book as a record of the useful work of a great surgeon.

Die alte und die neue Medizin, von Dr. Mariano Semmola, Professor der experimentellen Therapie a. d. Universität v. Neapel, etc. Uebersetzt von Professor Dr. Vincenz Meyer. Napoli: R. Stab. Tipografico Comm. Francisco Giaconini & Figli, 1885. Pp. 187.

The first edition of this admirable collection of lectures appeared some eight years since. The present translation is from the third edition, which has been carefully revised by the author. The object of the lectures, which are conceived in a scientific spirit highly creditable to the author, is to enter a protest against the exaggerated importance ascribed to purely pathological studies by the modern school of Germany. At the same time, the enormous importance of the experimental method, as applied to clinical study, is set forth in a masterly manner. While acknowledging the collateral benefits to be derived from pathological anatomy, the author has shown in a graphic manner the colossal evils which have grown out of the pedantic interpretation of clinical phenomena in the light of this laboratory science. The book is highly philosophical, and will be read with interest by those enlightened practitioners who are capable of seeing beyond the bounds of mere medical fashion.

Lehrbuch der Physiologie für akademische Vorlesungen und Selbstudium. Begründet von Rud. Wagner, fortgefuhrt von Otto Funke, neu herausgegeben von Dr. A. Gruenhagen, Professor der medizin. Physik an der Universität zu Königsberg i/Pr. Siebente, neu bearbeitete Auflage. Mit etwa Zweihundertundfünfzig in den Text eingedruckten Holzschnitten. Sechste Lieferung. Hamburg u. Leipzig: Leopold Voss, 1885. Pp. 113 to 272, inclusive.

The same, siebente Lieferung. Pp. 273 to 432, inclusive.

We have already expressed our praise of this scholarly work, which is now approaching its conclusion. The present numbers cover the most abstruse part of the subject, including general and special sensation. The seventh number is devoted almost entirely to the eye and optics, and is rather difficult reading, except for the advanced student. The illustrations, of which there are several, are mostly geometrical figures and cuts of instruments. As usual, the latest authorities have been consulted, and the foot-notes are copious. The histology of the sense-organs is thoroughly worked out, and nothing has been omitted that could throw any light upon this, the most difficult branch of physiology. Dr. Gruenhagen's work has in no wise deteriorated since the appearance of the first number. His zeal and industry have not flagged; in fact, a comparison of the earlier and later portions seems to show that his original plan has been extended, and his researches led him to exceed the original limits which he established. It is seldom the case that a serial publication like the present possesses the same general evenness as one which is complete at the time of its first appearance. This may account for the variations in the different numbers. Certain it is that a disproportionate amount of space has been given to the nervous system and the organs in relation with it.

The author's style does not become involved as his theme grows more abstruse, and in the main he spares his readers those ponderous sentences in which some authors delight. When completed, the "Lehrbuch" will prove a valuable addition to the library of the scientific physician, not only because of its inherent excellence, but by reason of the fact that the footnotes form an extensive "index medicus."

Surgical Handicraft. A Manual of Surgical Manipulations, Minor Surgery, and Other Matters connected with the Work of House Surgeons and Surgical Dressers. With 208 Illustrations on Wood. By Walter Pye, F. R. C. S., etc. Philadelphia: P. Blakiston, Son, & Co., 1884. Pp. xx-544.

Some fault has been found with the title of this book, but the author seems to have expressed very well what he intended —describing the details of surgical work as it appears from the point of view of house surgeons and dressers in surgical wards. The subject is a comprehensive one, for the house surgeon in a large hospital sees a great deal of surgery, and the book deals with a great many subjects accordingly. Beginning with the treatment of hæmorrhage, it deals in succession with bandages, splints, fractures, ulcers, deformities, emergencies, anæsthetics, and minor surgery.

In a work of this kind the author must find his chief difficulty in deciding what to omit. The subjects cover the whole range of surgery, and hardly any of them can be fully treated. For example, in case of ruptured bladder the treatment is embraced in passing a catheter and leaving the rest for the attending surgeon. In cases of fistula in ano the simple ones are to be operated upon in the usual way, which is described, while the severer ones are to be let alone by the house surgeon, and are therefore passed over by the author. The book is an exceedingly good guide for those for whom it seems to be intended, and it furnishes not only them but the general medical practitioner with an excellent book of reference for any emergency which may arise. The matter is well chosen, the style is clear and pleasant, the illustrations are many of them new, and the methods of treatment described are fully up to date. It is different in its scope from any book on minor surgery with which we are acquainted, and it compares favorably with them all. It rather tempts the reader to wish Mr. Pye had essayed a more elaborate task.

BOOKS AND PAMPHLETS RECEIVED.

Minutes of the Thirtieth Annual Session of the Kentucky State Medical Society, held at Crab Orchard Springs, June 24, 25, and 26, 1885.

Eleven Cases of Phthisis treated by Intra-pulmonary Injections of Carbolized Iodine. By John Blake White, M. D. [Reprinted from the "Medical Record."]

Some Remarks on the Diagnosis and Treatment of Spasmodic Stricture. By John Blake White, M. D. [Reprinted from the "Journal of Cutaneous and Venereal Diseases."]

Papers upon Genito-urinary Surgery. By A. T. Cabot, M. D., Surgeon at the Massachusetts General Hospital, etc. I.

Nephrotomy for Hydronephrosis; Recovery. II. The Constrictor Urethræ Muscle; Its Relations to Urethral Pathology and Treatment. III. Case of Multiple Calculi of the Bladder. IV. The Application of Antiseptic Principles to Genito-urinary Surgery.

Yucca angustifolia: a Chemical Study. By Helen C. De S. Abbott. [Reprinted from the "Transactions of the American Philosophical Society."]

Preliminary Analysis of the Bark of *Fouquieria splendens.* By Helen C. De S. Abbott. [Reprinted from the "Proceedings of the American Association for the Advancement of Science."]

A Few Suggestions for the Preparation of Milk for Infants. By John M. Keating, M. D., Philadelphia. [Reprinted from the "Medical News."]

Enucleation with Transplantation and Reimplantation of Eyes. By Charles H. May, M. D., Instructor in Ophthalmology, New York Polyclinic, etc. [Reprinted from the "Medical Record."]

Proceedings of the Academy of Natural Sciences of Philadelphia. Part I. January to March, 1886.

Fifth Annual Report of the State Board of Health of New York.

A Study of Diaphragmatic Pleurisy. By Frank Donaldson, Jr., M. D., Baltimore. [Reprinted from the "American Journal of the Medical Sciences."]

The Pneumatic Cabinet and Pneumatic Differentiation. By Frank Donaldson, Jr., M. D., Baltimore. [Reprinted from the "Maryland Medical Journal."]

Hard Chancre of the Tonsil. By Frank Donaldson, Jr., M. D., Baltimore. [Reprinted from the "Medical News."]

Clinical Observations on Reflex Genital Neuroses in the Female. By Paul F. Mundé, M. D., etc. [Reprinted from the "Journal of Nervous and Mental Disease."]

On the Limitation of the Contagious Stage of Syphilis, especially in its Relation to Marriage (read before the New York State Medical Society). By F. N. Otis, M. D., etc. [Reprinted from the "Journal of Cutaneous and Venereal Diseases.]

Report to Trustees of the Gesto Hospital, Isle of Skye, by R. M'Neill, M. D. Ed.

How to care for the Insane. A Manual for Attendants in Insane Asylums. By William D. Granger, M. D., First Assistant Physician, Buffalo State Asylum for the Insane, Buffalo, N. Y. New York and London: G. P. Putnam's Sons, 1886. Pp. ix–1 to 96.

On Dermatitis Ferox. By J. L. Milton, Senior Surgeon to St. John's Hospital for Diseases of the Skin. [Reprinted from the "Edinburgh Medical Journal."]

Twenty-sixth Annual Report of the Medical Superintendent of the State Asylum for Insane Criminals, Auburn, N. Y. For the Year ending September 30, 1885.

Report of a Case of Insanity following Gunshot Injury to the Head; Cerebral Cyst; Aspiration; Recovery. By Carlos F. MacDonald, M. D., etc. [Reprinted from the "American Journal of the Medical Sciences."]

Ethics of Female Sterility. By A. Reeves Jackson, A. M., M. D., etc. [Reprinted from the "Physician's Magazine."]

Remarks on Lateral Curvature, with Special Reference to its Occurrence in Children. By Samuel Ketch, M. D., etc. Read before the Orthopædic Section of the Academy of Medicine, January 29, 1886. [Reprinted from the "Medical Record."]

Die akute Neurasthenie, die plötzliche Erschöpfung der nervösen Energie. Ein ärztliches Kulturbild. von Dr. Med. Averbeck, dirig. Arzt u. Besitzer von Heilanstalt und Bad, Laubboch a. Rh. [Separat-Abdruck aus "Deutsche Medizinal-Zeitung."]

Seventeenth Annual Report and By-laws of the New York Physicians' Mutual Aid Association. 1886.

THE
NEW YORK MEDICAL JOURNAL,
A Weekly Review of Medicine.

Published by D. Appleton & Co.
Edited by Frank P. Foster, M. D.

NEW YORK, SATURDAY, JULY 17, 1886.

MEDICINE AND "THE SOCIAL EVIL."

Philanthropists, ecclesiastics, philosophers, statesmen, economists, and physicians have dealt in turn or in concert with the tangled mass of problems, religious, moral, and physical, connected with "the social evil." It is scarcely necessary to add that they have all succeeded only in making confusion worse confounded. It is rather from the general recognition of this unpromising result, we think, than from mere prudery that the subject is commonly avoided. But it ought not to be shunned; it ought to be most thoroughly discussed, and it should not be thought improper for women as well as men to take part in the discussion. In our opinion, therefore, the Society of Medical Jurisprudence and State Medicine is to be commended for having lately devoted one of its meetings to the consideration of the causes of sexual vice and the measures proper to counteract them. On that occasion Mr. Charles H. Kitchell presented a synopsis of a paper which embodied his thoughts on the subject. Mr. E. H. Benn opened the discussion, Dr. William M. McLaury followed with a paper, and the debate was continued by Dr. Spitzka, Dr. Brill, Dr. Harwood, Mr. W. H. H. Russell, and others.

We have been much interested in the published account of the discussion, and admit that some excellent suggestions were made, but we can not congratulate the speakers on having made any marked advance upon the efforts of their predecessors. Of course, we know nothing of what was said by Dr. Spitzka, Dr. Brill, Dr. Harwood, and Mr. Russell, for their remarks do not appear in the pamphlet that has been sent to us; but, so far as the other speakers are concerned, at least one defective fundamental thread seems to have run through their arguments—that of taking it for granted that human beings, men and women alike, have within them an enemy, in the shape of the sexual instinct, so potent that it can not be successfully opposed in the majority of instances by the ordinary moral and religious aids to a life of rectitude, but is only to be kept within bounds by favoring its legitimate gratification. This assumed state of things is not only held to be the chief cause of the failure of enactments against prostitution, but it is also adduced to enhance the enormity and unnaturalness of the course taken by virtuous women in commonly refusing to condone offenses against purity by individuals of their own sex.

We believe that the assumption is wholly unwarranted, and we are equally certain that the corollary which charges women in general with unreasonably throwing obstacles in the way of their erring sisters' reform by declining to overlook the enormity of their offense is correspondingly unjust. Every normal woman—normal physically and morally—knows that the assumed palliation has no real existence; she knows that, but for exceptional instances, the three hundred thousand women of the New England States and the State of New York for whom marriage is an impossibility, as Dr. McLaury remarks, bewail their enforced maidenhood, if they bewail it at all, for other reasons than the one suggested. She is therefore quite justified in declining to ignore (we do not say forgive) a course of licentiousness which she feels outraged at hearing compared to the sheer giving way of poor human nature under the pressure of its own weight. We are convinced that the first step to be taken in bringing a community to a proper understanding of the subject is the overthrow of this initial error, and in this achievement medical observation ought to be of distinct service.

THE ILLINOIS STATE BOARD OF HEALTH'S FIGHT WITH QUACKERY.

In Dr. Rauch's reports to the Illinois State Board of Health, of which he is the secretary, one is apt to meet with interesting matter energetically presented. The report which he made to the board on the occasion of its last quarterly meeting is no exception to this rule. It contains a succinct account of the proceedings of a sanitary conference held in Springfield toward the close of May, a paragraph on the general health of the State during the quarter, with a brief allusion to a case of recovery from glanders in the human subject, the report of a recent inspection of the water supply and sewerage of Chicago, and a statement of the present status of cholera in Europe. Each of these subjects is handled with the secretary's usual clearness and vigor, and what he has to say about them can not fail to prove of interest to readers of the document. Doubtless, however, this part of the report will not generally be thought so entertaining as the portion that precedes it, in which certain quackish doings are recounted and stigmatized as they deserve.

It seems that a graduate of the Hahnemann Medical College of Chicago, named Heath, was granted by the board, in 1879, a certificate enabling him to practice under the laws of the State. In issuing the certificate, the board, of course, did no more than its duty compelled it to do under the law, and no more than, in its regular line of work, it was doing for every graduate of a legally reputable medical college who asked for its certificate. Nevertheless, this man Heath, having gone out of Illinois, has indulged in the usual *ad captandum* devices of quacks, including the distribution of a circular concluding with the statement: "The following-named doctors stand at the head of the medical profession, and have indorsed the papers of Dr. Heath and recommended him as a physician and surgeon." Then follows a list of the members of the Illinois State Board of Health and of the signers of the man's diploma. Dr. Rauch very properly recommended the revocation of Heath's certificate, for "unprofessional and dishonorable conduct," and we are glad to see that the board took action to that effect.

Another subject of interest mentioned in the report is a concern termed the Chicago Northwestern College, an inquiry into the affairs of which was prompted by questions from Iowa, where a man had presented a diploma issued by the institution, which has also been known as the Edinburgh University of Chicago. It did not confine its efforts to teaching medicine, but professed also to teach "the common English branches usually taught in common academies of learning," including "philociphy," and, like the penniless Scotch nobleman's devoted adherent, it accounted for its lack of certain of the resources of a college by mentioning that they had been destroyed by "the great fire."

MINOR PARAGRAPHS.

AMERICAN DENTISTS IN GERMANY.

The excellence of American dentistry is nothing new to Europeans, but it is not often that such tangible testimony is borne to it as is involved in the establishment of a German journal as the express exponent of the thought and interests of German dentists educated in America. Such is the function of the "Journal für Zahnheilkunde, Vereins-Organ der deutschen Vereinigung in Amerika graduirter Doctoren der Zahnheilkunde," the first number of which has just reached us. The new journal, which is to be a quarterly at first, with the prospect of more frequent publication in the future, is edited by Dr. Erich Richter, and published in Breslau. The initial issue is handsome in appearance, and is filled with excellent matter. We have no doubt of its prosperity, and we wish it the fullest measure of success, quite as much for its own merit as out of gratification at the implied honor to our country.

AN AMERICAN NOSTRUM IN SOUTH AMERICA.

Of quite a different tenor are the doings of one Bloom, who has been brought before the Procurator of Justice in Buenos Aires, according to the "Noticioso Médico," charged with selling pills containing substances notoriously injurious to health. An analysis by the Board of Health showed that each pill contained a milligramme of phosphorus, two milligrammes and a half of strychnine and brucine, and a notable quantity of cantharides. Clinical data were brought forward showing that the pills had produced gastritis in persons who had taken them.

NEWS ITEMS, ETC.

Infectious Diseases in New York.—We are indebted to the Sanitary Bureau of the Fourth Division of the Health Department for the following statement of cases and deaths reported during the two weeks ending July 13, 1886:

DISEASES.	Week ending July 6.		Week ending July 13.	
	Cases.	Deaths.	Cases.	Deaths.
Typhus	1	0	0	0
Typhoid fever	8	1	10	4
Scarlet fever	13	3	34	5
Cerebro-spinal meningitis	4	4	5	5
Measles	62	10	74	12
Diphtheria	80	35	69	34
Small-pox	0	1	2	0

Cholera in Europe.—The disease is reported to have advanced as far as Venice and Trieste. There is still time for it to reach America this year, but, since the summer is now half over without its having made much headway in Europe, the chance of its coming here seems very small.

A Pasteur Institute in Buenos Aires.—At a meeting lately held at the rooms of the Argentine Medical Club, steps were taken toward the establishment of a Pasteur institute, in support of which it is thought that the South American countries will generally contribute. A preliminary step in the undertaking is the sending of a gold medal to M. Pasteur, bearing the inscription "À M. Pasteur. Los organizadores del Instituto Pasteur en Buenos Aires."

The New York County Medical Association.—An error crept into our reporter's account of the meeting of May 17th, which was published in our last issue, page 48. The name of the physician mentioned in the case reported by Dr. Lusk was Dr. Mead, and not Dr. Lee.

Personal Items.—Dr. John S. Billings, of the army; Dr. Fordyce Barker, Dr. P. F. Chambers, Dr. F. Hustace, Dr. Andrew H. Smith, Dr. Newton M. Shaffer, Dr. George M. Tuttle, and Dr. Henry F. Walker, of New York; Dr. Louis Starr, of Philadelphia; Dr. James R. Chadwick, of Boston; Dr. H. P. C. Wilson and Dr. Frank Donaldson, of Baltimore; and Dr. W. C. Wile, of Sandy Hook, Conn., sailed for Europe last week. Dr. W. T. Lusk, of New York, sails to-day.

Arsenic in Skin Diseases.—The editor of the "Journal of Cutaneous and Venereal Diseases" is desirous of ascertaining to what extent arsenic is used by American physicians in the treatment of skin diseases, and also the results of their experience as to its therapeutical value. Information upon the following points is requested of every physician who reads this: Are you in the habit of employing arsenic, *generally*, in the treatment of skin diseases? In what diseases of the skin have you found arsenic of superior value to other remedies? What ill effects, if any, have you observed from its use? What preparation of the drug do you prefer, and in what doses do you employ it? Address, Editor of the "Journal of Cutaneous and Venereal Diseases," 66 West 40th Street, New York.

Society Meetings for the Coming Week:

Monday, *July 19th:* Hartford, Conn., City Medical Association Chicago Medical Society.

Tuesday, *July 20th:* Medical Societies of the Counties of Kings and Otsego (annual — Cooperstown), N. Y.; Ogdensburg Medical Association.

Wednesday, *July 21st:* American Neurological Association (first day—Long Branch, N. J.).

Thursday, *July 22d:* American Neurological Association (second day).

Friday, *July 23d:* American Neurological Association (third day).

Proceedings of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Meeting of May 26, 1886.

The President, Dr. John A. Wyeth, in the Chair.

Dr. Waldstein, of the Committee on Microscopy, reported on the specimen presented at a recent meeting by Dr. George F. Shrady, being a hard plate, 7 cm. long and 3·5 cm. wide, with several sharp processes, connected with the spleen. They found the specimen to be one of chronic perisplenitis with calcification of tissue. The condition was very rare.

Leucæmia.—Dr. Hodenpyl presented specimens removed from the body of a man who had died with the symptoms of leucæmia. The patient said that eight months previously he was in perfect health. He then sustained an injury of the left hand, which was followed by inflammation and an indolent ulcer of the forearm. Six months ago he had an abscess of the thigh, which resulted in an indolent ulcer. Three months ago he noticed a change in the color of his skin. He gradually lost strength, his appetite failed, and diarrhœa developed. Two months ago there was swelling of the epigastrium, which was somewhat tender; at the same time there was anasarca of the feet and ankles, which gradually extended upward, also slight dyspnœa and cough. On admission to the hospital, the patient appeared to be fairly nourished, the skin was of a dirty yellowish-white, the mucous membranes were almost bloodless, and the superficial veins were enlarged. There were evidences of chronic bronchitis. There was a systolic murmur heard most distinctly at the apex, also an anæmic bruit with the first sound at the base of the heart. The area of splenic dullness was increased. There was no fluid in the abdominal cavity. The blood was examined a few days before death, and showed acid reaction, and contained a large increase in the number of the white blood-cells. The temperature was 101·6° F. The patient complained most of dyspnœa during the night. The night of May 23d he had violent delirium.

At the autopsy, sixteen hours after death, the rigor mortis was not at all well marked. There was peribronchitis, with a small amount of fluid in the pleural cavity, and the pericardium contained several ounces of clear fluid. The liver was enlarged. The spleen was enlarged and showed perisplenitis. There was a moderate amount of diffuse nephritis. The organs were pale. The lymphatics throughout the body were enlarged.

Multiple Stricture of the Œsophagus; Gastrostomy.—Dr. A. Jacobi presented the œsophagus and part of the stomach of a man in whom were found at the autopsy the following lesions: Multiple strictures of the œsophagus, commencing acute peritonitis near the wound where gastrostomy had been performed, chronic endocarditis, chronic bronchitis, emphysema, bronchopneumonia, acute pleurisy, chronic diffuse nephritis, chronic interstitial nephritis, and chronic gastritis. The patient in 1885 drank some spirits of ammonia by mistake. Since then there had been gradually increasing difficulty in swallowing. Lately he had had difficulty in swallowing even liquids. A short time ago a physician attempted to introduce œsophageal bougies, and a small one was said to have passed. The patient on entering the hospital was found to weigh eighty-eight pounds; formerly he had weighed one hundred and sixty pounds. Numerous efforts were made to pass small bougies. They passed some of the strictures, but none could be made to enter the stomach. The smallest stricture was situated low down. Finally gastrostomy was resorted to. An incision two inches long was first made, and afterward, on account of the difficulty of reaching the stomach, was prolonged to three inches and a half. The stomach was then stitched to the incision in the abdomen with a large number of stitches so as to cause adhesive inflammation to take place more rapidly. It was then resolved not to make the opening into the stomach for a few days, until after adhesion had been completed. Meanwhile alimentation was to be continued by rectal enemata. The patient died of exhaustion a number of hours after the operation. In addition to the lesions already mentioned, the speaker called attention to the principal stricture of the œsophagus, situated near the stomach, sixteen inches and a half below the teeth. There were wounds of the mucous membrane at the sites of the different strictures, evidently the result of attempts to introduce bougies. There was a communication between the œsophagus just above the lower stricture and the stomach by way of an artificial duct made by a bougie, in the course of which there was an abscess which contained pieces of egg-shell. The case illustrated the danger of œsophageal bougies even when very gently used.

Congenital Choroido-cyclitis the Cause of Sympathetic Irritation in the other Eye in the Thirty-seventh Year.—Dr. Hermann Knapp presented an eyeball affected with choroido-cyclitis, probably congenital, which he had removed from a woman thirty-seven years of age. When the patient was six weeks old her parents noticed two black patches in the upper ciliary region. She had never seen with that eye, but it had given her no trouble until three months before Dr. Knapp saw her, at which time the other eye became intolerant of light and weak in sight. The cornea of the blind eye was shrunken, there were two small nodules in the upper ciliary region, and the pupil was enlarged, irregular, and completely immovable. Brownish masses projected into the vitreous, and were distinguishable from tumors only by their ill-defined superficies. The vitreous was bloody and watery. The retina in the posterior half was thin, and so firmly attached to the highly atrophied choroid that only one blood-vessel betrayed its presence. The optic disc showed a marked glaucomatous excavation. After removal of the blind eye the section of the optic nerve was reddish, the subvaginal space was enlarged, and its soft trabecular tissue reddish and abundant. Through the thickened and irregular ciliary region a thick false membrane stretched unbroken transversely through the globe. When it was incised, serous fluid escaped. Dr. Knapp remarked that this condition was not rare in old degenerative processes of the eyeball. The most remarkable feature in the case was the lighting up of sympathetic irritation by a congenitally diseased eye after a quietude of thirty-seven years, during which time the morbid process, though steadily advancing, had not caused any disturbance.

Cerebral Hæmorrhage.—Dr. Frank Ferguson presented a brain and spleen of a man in whom cerebral hæmorrhage, infarction of the spleen, interstitial hepatitis, and chronic diffuse nephritis had been found. For two days the patient had complained of rheumatism, and on the date of admission had suffered from pain in the stomach, for the relief of which he had got some medicine at a drug-store. Soon afterward he was found unconscious, and the ambulance was sent for. The surgeon in charge of the ambulance found the patient comatose, the pupils little larger than a pin-head, the conjunctivæ insensitive, and the breathing slow and stertorous. Under the circumstances it was thought to be a case of opium poisoning, and the patient was treated accordingly. He died three hours after admission. The pulse had been forty to the minute. The autopsy showed hypertrophy with dilatation of the left ventricle of the heart, vegetations on the aortic valves, and a small ulcer on the mitral valve. There was a large infarction in the spleen. There was a considerable hæmorrhage in one of the cerebral ventricles.

Dr. H. C. Coe thought the case was interesting from a medico-legal aspect. He had once been called to a patient whose previous history he knew nothing about, and, after receiving a hypodermic injection of about one eighth of a grain of morphine, she became comatose, the pupils contracted, and she was apparently suffering from opium poisoning. She continued comatose for about thirty-six hours and then died. It became evident, however, both to himself and to Dr. Janeway, who also saw her, that there were unmistakable signs of hæmorrhage into the pons. The administration of a small hypodermic of morphine and the occurrence of coma from cerebral hæmorrhage soon afterward was a mere coincidence.

Dr. A. Jacobi thought the pulse, being only forty to the minute in the case narrated by Dr. Ferguson, should have excluded opium poisoning. Small pupils might be present in cerebral hæmorrhage, uræmic poisoning, or a number of conditions.

Dr. John C. Peters read a communication from Dr. Middleton Goldsmith relating to gangrene, with an account of some original experiments.

MEDICAL SOCIETY OF THE COUNTY OF KINGS.

Meeting of April 20, 1886.

The President, Dr. George R. Fowler, in the Chair.
Dr. C. E. De La Vergne, Secretary.

Mechanical Support in Uterine Displacements, with reference to the Management of certain Complications.—Dr. Walter B. Chase read a paper with this title. [See p. 10.]

Dr. Emery exhibited a pessary made of cork, in the form of a horse-shoe, devised by himself some years ago. He said that it was especially useful in holding in place prolapsed ovaries as well as the uterus. It was light and easily retained, and, in fact, was the only pessary that would answer the purpose in some cases.

Dr. Rochester understood that the pessary was to lie on its back, with the convex surface toward the coccyx, and he inquired if Dr. Emery had been successful in retaining the pessaries in position for any length of time.

Dr. Emery said that they had been retained in position four months.

Dr. Bartley asked whether these cork pessaries would become more offensive than those of rubber. It would seem to him that, being porous, they would become offensive.

Dr. Emery replied that they were prepared by a peculiar process. After the pessary had been cut out of cork, it was polished and the pores were all filled. The surfaces were all made smooth by very fine sand-paper, and, finally, the cork was coated with a preparation of flexible collodion—celluloidin, as it was called. That was the second coat, and the third was of contractile collodion. At the last there was a number of coats, all carefully rubbed down by hand. This could only be done by one exceedingly expert at the process. This pessary was not practicable for ordinary purposes. It was expensive; but it was better in some cases than other pessaries, and sometimes answered when nothing else would. It was as light as the cotton pessary, and of the requisite thickness to keep its place. The trouble which he had found with the cotton pessaries covered with gutta-percha, of which he was the originator, was that they were not readily retained in place. He had prepared cotton pessaries, using some internal stiffening, but they were not at all satisfactory.

The President said that it would be interesting to the society if the doctor would describe the class of cases in which these cork pessaries were applicable.

Dr. Emery replied that they were especially applicable in cases of prolapsus of the ovaries without retroflexion, and when the lateral ligaments were shortened and the bodies were carried forward with a sense of dragging. In those cases ordinary pessaries could not be endured, nor, in fact, any other.

Dr. Rochester did not wish to make any invidious remarks, but he did not quite understand Dr. Emery's pessary. There did not seem to be any particular provision for supporting the ovaries upon either horn of the pessary. There would seem to be a natural tendency to fall back or to be carried forward. It had the advantage of being light; but so had the cotton pessary. He believed that the cotton pessary would hold better.

Dr. Emery said that the pessary in practice did its work well. It certainly acted well according to his experience.

The President asked if Dr. Emery could tell why it remained in place?

Dr. Emery replied that in large flabby vaginæ it might not retain its place; but in a vagina not large or flabby there was no danger that the pessary would not be retained. The firm tissues of the parts would keep it in its place. It was so light that it did not sink down by its own weight. The ovaries rested upon the arms of the pessary very readily, and by its use the patient was given perfect relief almost instantly after it was put in place.

Dr. C. N. Dixon Jones said that Dr. Chase had gone over the subject of his paper very fully, but it seemed to him that he had not given sufficient importance to the different forms of circum-uterine inflammation complicating displacements. He had almost come to believe that displacement of the uterus, out of the so-called normal position, rarely gave rise to any trouble if there was not inflammation of some form, either around the uterus itself, the Fallopian tube, or the ovary. The great influence of disease of the Fallopian tube in the production of uterine displacements should not be forgotten. The peritonitis in many of these cases originated in a salpingitis. In the treatment of these complicated cases he could testify to the value of the use of the cotton tampon. He thought it improved the pelvic circulation, relieved engorgement, and softened out induration whether due to cellulitic or peritonitic inflammation. In connection with glycerin, he had used boro-glyceride instead of carbolic acid, as the latter was objectionable to some patients on account of the odor. In a certain proportion of cases, however, the uterine displacement was due to disease and fixation of the tube and ovary, the uterus being drawn out of position by the contraction of bands of adhesions, the tubes often forming strong fibrous cords adherent to the broad ligament and serving to fix the uterus in its abnormal position. In these cases, not only replacement, but even palliation of the symptoms, without an operation, was impossible. The uterus was often enlarged and tender, pessaries were either unbearable or useless, and all local measures after prolonged treatment proved fruitless. In such cases removal of the uterine appendages, thereby causing atrophy of the uterus, afforded the only hope of a cure. He related the history of a case, in which he had recently operated, illustrating this condition. For a period of three years the patient had wandered from one doctor to another without obtaining relief. Examination showed signs of extensive pelvic peritonitis, and the uterus was retroflexed and retroverted and held by bands of adhesions. The tube on each side could be made out as enlarged and adherent. As her condition was rapidly becoming worse, she readily consented to an operation. The principal adhesions were found to surround the tubes and ovaries, after the removal of which the uterus became quite free.

Dr. Chase said that the point made by Dr. Jones was important. In fact, he thought that there could be no question whatever that pelvic cellulitis and pelvic peritonitis were the conditions which had given more work to the physician than any other single condition of the female pelvic cavity, if cervical metritis was excepted. He believed that it was only during the last few years that the significance of these conditions had been fully recognized. Dr. Emmet in his late work had dwelt particularly on the close relation which pelvic cellulitis bore to the various forms of uterine disease. If the methods of exploration were adopted which he (Dr. Chase) had recommended in his paper, especially in cases where displacements were backward, where the utero-sacral and broad ligaments were involved, errors both in diagnosis and in treatment would be less frequent. The same might also be said concerning procidentia. The subject of the relations of pelvic cellulitis and peritonitis to various forms of pelvic disease was a broad one, and could not be exhausted in the brief discussion of an evening.

Meeting of May 18, 1886.

The President, Dr. George R. Fowler, in the Chair;
Dr. C. E. De La Vergne, Secretary.

Wiring of the Patella, and Incision of the Quadriceps Extensor after Macewen's Method.—The President read the following account of a case:

On September 24th I was requested by Dr. Quinn to visit John Quinn, aged seventeen, with him concerning a fracture of the patella which he had suffered the day previously. The fracture was of the ordinary transverse variety, the lower fragment being somewhat smaller than the upper, and was probably due to muscular action. A space of about two inches separated the fragments. The case was treated with the plaster-of-Paris splint, with a large fenestra at the site of the anterior region of the knee joint. The upper fragment was held in position, after coaptation, by means of a compress held in position with adhesive plaster. At the end of seven weeks the splint was removed. Ligamentous union was found to have taken place with a space of about half an inch between the fragments.

Several weeks afterward the patient accidentally fell and stretched the ligamentous connection between the fragments to a length of about two inches and a half. Almost total loss of the power of locomotion followed this accident. Attempts to approximate the fragments by means of an elastic bandage were made, and the latter was worn continuously for several months, but with no improvement. Walking was accomplished by a peculiar "sidling" gait, in which the leg was kept extended. If flexion occurred, the limb could not be brought into an extended position except by rotating it and allowing the weight of the leg to assist in bringing it into line with the thigh.

In view of the young man's station in life and the necessity for greater usefulness of the limb in earning his living than was likely to result from the employment of any of the usual methods of treatment at this stage of the case, I advised wiring of the fragments, and he entered the hospital for that purpose. On May 4, 1885, nearly eight months after the accident, the following operation was done, all antiseptic precautions being observed: A transverse incision was made over the anterior aspect of the knee joint, and the ligamentous band of union dissected from between the fragments. By means of a fine saw, thin slices were removed from the opposing surfaces of the line of fracture. A hole was drilled through the middle of each fragment, commencing about three fourths of an inch from the edge of the freshened surface and upon the anterior surface of the bone, and terminating at the point where its cartilage-covered, or posterior, surface joined the line of fracture. Silver wire was then passed through the holes in the fragments, this being greatly facilitated by first introducing a small cannula. Traction being made upon the upper fragment, it was found impossible to bring it to within an inch and a half of the lower fragment. In this emergency I resorted to the expedient first suggested by Macewen, of Glasgow. An incision about eight inches long was made upon the anterior surface of the thigh and parallel with the center of the quadriceps extensor muscle. The latter was rapidly laid bare for about the same extent of its anterior surface, and four incisions were made in such a manner as to form a **W**-shaped, transverse, incomplete section. The outer and inner arms of the **W**, however, were not allowed to encroach to within a finger's breadth of the corresponding edges of the muscle. By this means a narrow strip upon either edge of the muscle was allowed to remain intact, while the most unyielding portion, the central, upon a line with the tendon where it is inserted into the upper edge of the patella, was weakened by angularly placed incisions passing through the entire thickness of the muscle and joining each other in a manner to form the above-described **W**. This being accomplished, traction was again made and the fragments were approximated without any further difficulty. It was noted that, when traction was made, the lines of incision in the muscle forming the **W** simply lengthened and closed in upon each other, no gaps occurring; but the elastic muscular structure at once filled in the spaces which would otherwise have resulted. In other words, the muscle narrowed transversely as it was increased in length. This narrowing served likewise to arrest the hæmorrhage, which at first was quite free from the divided muscle. The wires were crossed close to the bone after coaptation and passed through holes in a plate of hard rubber, and upon this latter they were twisted, thus firmly securing the fragments in position. Half-inch rubber drains were placed at the outer and inner extremities of the transverse incision so that their ends projected slightly within the joint capsule; the latter was united by a continuous catgut suture, and the cutaneous margins of the wound were brought together by a separate suture of the same material. The longitudinal incision in the thigh was closed in the same manner, but no drainage-tube was here employed. Dressings of wood-flour cushions were applied and the limb was bandaged to a wire-cloth splint. Frequent irrigation by means of a 1–1,000 solution of mercuric bichloride was employed during the operation, and before finally applying the wood-flour cushions a stream of this solution was passed through the joint from one drainage-tube to and through the other, until all traces of blood were washed out of the joint and the solution came out perfectly clear.

This patient's temperature never rose above the normal, and his pulse did not exceed 88 after leaving the operating-room. The primary dressings were not removed until the ninth day, and then only for the purpose of removing the drainage-tubes. Union by first intention occurred in both incisions; not the slightest indication of suppuration was found. After removing the tubes a few strands of catgut were substituted therefor, and a dressing of wood-flour cushions was again applied. These were left undisturbed for a fortnight, when, union being complete and perfect, the parts were simply bandaged with a roller and the limb was kept in a splint. At the end of the fourth week, bony union having taken place between the fragments, the wire was released by cutting one of its extremities close to the integument under the plate of hard rubber and removed by making traction upon the other extremity. The patient was now allowed to move about on crutches, but was kept in the hospital under observation until July 16th, when he was discharged cured. Considerable power of motion then existed, and at the present time he walks without perceptible halt, can run up and down stairs, and flexes and extends his leg with a facility sufficient for all practical purposes; in fact, almost equal to that of the other limb.

Remarks: One of the features of this case worthy of note is the employment of large drainage-tubes. Perhaps, if our antiseptic precautions were of such a character as to be entirely relied upon, the employment of means to accomplish drainage of the joint could be dispensed with. We have not reached, in my opinion, this stage in the surgery of the larger joints, and it is for that reason I advocate the use of drainage-tubes of at least from three eighths to half an inch in their inside diameter.

It will be noticed that the first dressings were not removed until the ninth day following the operation. The only indication for their removal at that time was the necessity for the removal of the drainage-tubes. Had I been able to obtain sufficiently large absorbable bone drains, a second dressing need not have been used in this case. As it was, the healing practically took place under the first dressing.

As regards the propriety or justifiability of operating in this case, I think all who saw this boy prior to the operation could not but agree with me that the limb was very seriously disabled. The risks of the operation itself, in my judgment, were not sufficiently grave to deter me, under the circumstances, from advising and performing it. I may state here the conclusions I have come to respecting the classes of cases in which the patella should be wired. First, I think that all compound fractures of this bone should be sutured. Here the joint is already opened, and the ordinary difficulties encountered in keeping the fragments in coaptation are very much increased by the presence of the wound. Second, in cases in which it becomes necessary to open the joint freely in order to expose and tie the bleeding vessel where a hæmarthrosis complicates the fracture, it is likewise proper to suture or wire the fragments. In both of these classes of cases the drilling of the bone and passing the suture adds nothing to the already existing danger. Third, in cases in which the result following the ordinary methods of treatment is such as to invalidate or seriously impair the efficiency of the limb; or in which the chances of a good result are destroyed, as in this case, by an accidental overstretching of the ligament subsequently; and particularly if the patient's station in life is such as to require sound and useful limbs in order to earn his living—in such cases I think the operation, performed under the strictest aseptic surroundings and by a surgeon skilled in the practical application of the principles of aseptic surgery, is not only justifiable, but is imperatively demanded. I am not prepared to say that all cases of fractured patella should be submitted to this operation. It can not be denied that some danger, lessened though it may be by our improved means of operating, attends the opening into the knee joint. This, taken in connection with the fact that good results are certainly attained by methods other than operative, leads me to exercise caution before declaring that all fractures of the patella, irrespective of their nature, can be wired or sutured with propriety.

Dr. Pilcher said the case presented was an exceedingly gratifying one, and the result that had been obtained was almost perfect. The young man himself had a great deal of confidence in the perfection of his cure, for, without hesitation, he had thrown his whole weight upon the affected patella in trying to step upon a chair at the speaker's request. The result itself was the best comment upon the case. With regard to the question of the propriety in certain cases of exposing a fractured patella, and of introducing the wire suture for the purpose of obtaining coaptation, while union was taking place, the manner in which the President had classified the cases in his remarks was such as likewise commended itself to the speaker's judgment, with this additional qualification: that, provided the person had experience in the use of antiseptic measures, and provided likewise he had the facilities for carrying them out perfectly in each individual case, then he might feel that he was justified in opening a joint so large and important as that of the knee, and proceed to do the more radical measure which had been done in this case. It was only the afternoon of the day of the meeting that he had had occasion to examine a case of an old patella fracture in a man of some forty-five years of age. The fragments were separated from each other four inches and a half when the knee was flexed, and yet this man had a comparatively useful limb. He could walk along comfortably and go up and down stairs readily, and for all practical purposes, under ordinary circumstances, had a good leg, notwithstanding that the separation between the fragments was so great. And yet even he had considerable disability whenever an unusual demand was made upon the leg, as his experience had showed; for, being about to slip, in consequence perhaps of some weakness of that leg, he was unable to recover himself, and, falling, had sustained a fracture of the leg of the side on which the patella was disabled, illustrating that, notwithstanding an apparent ability to get along well with widely separated fragments, this ability might prove to be illusory in emergencies, when full functional power was required to avert disaster.

Still, even in the light of such experiences as this, the speaker remained of the opinion that, unless the surgeon had the necessary experience to enable him to assure his patient of the perfect degree of success obtained in the case shown by the President, it would be better to treat simple fractures of the patella after the old ways. Where, however, the knee joint had already been opened and a compound fracture was presented, the question was of quite a different character. Septic infection was already probable, requiring to be met by the methods of free incision, antiseptic irrigation, and drainage, in connection with which, and without additional hazard, the patient might have the further chance of obtaining a perfect limb by means of the wire suture. In conclusion, he would emphasize his opinion that it was only in this latter class of cases that it would be wise for most surgeons to have recourse to the method of treatment by the metallic suture. An immediate disability from more or less separation of fragments might diminish with time, and a fair amount of functional power be regained, even with great separation, as was well understood, while the hazards of the attempt to expose the patella and to wire it, by an operator who was not a perfect master of antiseptic methods, were far too great to be incurred for the sake of a possible diminution of the time of treatment or a better functional result.

Dr. J. H. H. Burge said this case was one more demonstration of the value of aseptic methods in surgery. Before the time of such methods, operations like this could not have been successful. He had been impressed not only by the excellent ultimate result in these cases of wiring of the patella, but by the time saved to the patients. A series of cases exhibited by Dr. Dennis, of New York, included some only a few weeks old in which the union was firm and the limb useful. Dr. Burge desired to emphasize the caution given by Dr. Pilcher, that these operations should be performed only by those surgeons who were thoroughly familiar with aseptic work.

Dr. Rochester asked the president whether he had any statistics bearing upon the subject.

The President, in reply, said that, in considering the statistics of the operation of wiring the patella, the cases should be classified according to the character of the injury, the stage of the case, and the urgency of the symptoms. Operations performed from almost absolute necessity should not be considered in the same category as operations of convenience. Taking all cases together, however, although not prepared to give exact figures, he would state in a general way that the mortality was remarkably low, certainly not high enough to deter even the most conscientious surgeon from performing it in cases where it was indicated. It was true that unfortunate results other than death—such as ankylosis of the knee joint and necrosis of one of the fragments—were said to have occurred. That the latter need not necessarily be considered an ill result was illustrated by a case occurring in the speaker's practice, in which, the fracture being compound, wire suturing was at once resorted to. Considerable damage had been done to the periosteum by the injury, and the entire upper fragment became necrotic, although the case pursued an aseptic course. The necrosed fragment was subsequently removed. The final result, however, was a functionally perfect limb. He therefore would not include among cases having an unfortunate termination necrosis of one of the fragments unless the final ending of the case demanded it. With regard to cases where the operation was more or less one of convenience, and in which an unfortunate issue ensued, these should be hardly taken into consideration when dealing with cases in which the operation was really required. To sum up this whole matter of statistics he would say that the most favorable showing of figures would not justify a surgeon in risking human life unnecessarily, while, on the other hand, loss of life in performing what might be justly termed a needless operation should not militate against the performance of a wiring of the patella in the cases in which it seemed to be indicated. For these reasons each surgeon must be left to judge for himself; it was simply a question between his own conscience and the welfare of his patient, and mere figures could help him but very little in a given case.

In closing the discussion, Dr. Fowler said that when disability occurred, after a comparatively good recovery and useful limb in the beginning, such disability was apt to be permanent. All that nature did for these cases she did at first, and any subsequent injury to the patella sufficient to stretch the ligamentous union between the fragments invalidated permanently the good result at first obtained. Again, it was difficult to explain why, with a comparatively slight interval between the fragments, there should be an almost useless limb in one case and in another a functionally perfect one, this observation likewise holding good in the cases of long ligamentous union. Possibly the point of union of the ligament might have something to do with its usefulness; as, for instance, in cases where it was attached to the anterior portion of the edge of the fractured surface, a manifest disadvantage would ensue when attempts were made to use these two irregularly shaped masses of bone, with their tendency, under these circumstances, to tilt backward, as portions of the extensor apparatus of the leg. In this instance the ligament was mostly made up of a thickening of the aponeurotic expansion overlying the patella in health, while comparatively little of its formation was due to the capsule. On the other hand, when the latter took a larger part in the formation of the ligamentous union, the lateral aspects as well as the under surface of the fragments were so supported as to prevent tilting as the knee was flexed and extended. In one case, at least, of considerable disability, the speaker made the observation, at the time of wiring, that a thick fibrous cord, made up almost entirely of thickened aponeurotic structure, was attached to the anterior edges of the fragments, while the capsular attachments were thin and thrown into loose folds, allowing, without doubt, of sufficient tilting to account for the uselessness of the limb.

Reduction of a Dislocation of the Humerus of Long Standing by Open Incision.—The President read the following:

Three years ago Minnie Post, aged thirty-eight, single, a seamstress, while attempting to save herself from falling down stairs, suffered a dislocation of the right humerus at the shoulder joint. It was reduced at once. Two weeks afterward the dislocation recurred, the patient being unable to account for the accident in this instance. This dislocation was reduced after a month had elapsed. Six weeks later another apparently spontaneous dislocation occurred, upon which latter occasion reduction was at once accomplished. Following this, recurrences of the dislocation took place repeatedly, and, although reduction was promptly effected in each instance, the bone never remained in position more than two weeks before it would again, and without apparent cause, become displaced. At the time of her coming under my observation the head of the humerus was resting below the coracoid process, where, the patient stated, it had been for more than six months. She suffered constant pain in the arm, and in the condition she was then in it was impossible for her to earn her living at her vocation of seamstress.

On April 1, 1886, I performed the following operation for the reduction of this dislocation: An incision was made, commencing at a point just within the tip of the acromion process of the scapula and curving downward and inward, and then upward, so as to terminate at a point about two fingers' breadth to the inner side of the coracoid process. The prominence formed by the displaced head of the humerus lay in about the center of the space marked out by this U-shaped incision. A flap, consisting of integument, fascia, and fat, was now dissected and turned upward, the fibers of the deltoid muscle were separated with the handle of the scalpel, and the tendinous margin of the pectoralis minor was brought into view and retracted, when the capsular ligament was exposed. This latter had been pushed under the coracoid process and seemed untorn. A strong adventitious band was found lying across the humerus at the site of its anatomical neck; this being divided, attempts to reduce the dislocation by manipulation were made, but failed, although the head of the bone moved more freely than before. An attempt was now made to reduce the dislocation by the ordinary method, with the heel in the axilla, but this, too, proved unsuccessful. The strong downward traction made during this latter attempt, however, showed the presence of dense adhesions between the capsular and coraco-humeral ligaments and the aponeurotic structures attached to the coracoid process. These were divided with blunt scissors, and another attempt at reduction with the heel in the axilla was made, but without effect other than to disclose the existence of a strong and sharply defined band occupying the site of the coraco-humeral ligament. This seemed to be the ligament itself very much shortened, and, upon applying the scissors to it while strong traction was made upon the arm in a downward direction, it gave way with a decided snap. The head of the bone was now replaced in the glenoid cavity by simple manipulation and with the characteristic "thud." It was noted that the capsular ligament upon the anterior and outer aspects of the displaced bone was somewhat attenuated from prolonged strain in its abnormal position.

After reduction, several buried catgut sutures were so applied as to take up a loose fold of the capsular ligament which remained, and attach it to the sheath of the deltoid wall toward its humeral portion, with the view of re-enforcing this portion of the capsule and keeping its loose portion well over toward the glenoid cavity. A rubber drainage-tube was then passed to the deeper portion of the wound and so arranged as to rest in the most dependent angle of the latter, which, with the patient lying upon her back, was at its acromial end. The "dead space" in the depths of the wound was closed, as far as possible, with buried catgut sutures, and the edges of the cutaneous incision were brought together with a continuous suture of the same material. During the operation the wound and surrounding parts were frequently irrigated with a 1–3,000 solution of hydronaphthol, and, just before applying the sutures, sterilization was accomplished by means of a 1–12,000 solution of potassio-mercuric iodide. Perforated oil-silk next to the wound, and paper wool, the whole held firmly in place, constituted the dressing. The arm and forearm were secured to the chest by means of a roller bandage. But one vessel had required ligature, a small cutaneous branch at the inner extremity of the incision.

The following day the dressings were stained with serous exudation and were changed. The pain was very slight, and there was no rise of temperature. On the second day the dressings were again found to be stained and were removed. Some tension upon the edges of the wound was noted at one point, and a slight reddish blush observed. The suture was liberated at this point and the wound redressed. Temperature 100·5° F.

On the third day the temperature rose to 101·8° F., and, upon removing the dressings, a very small amount of pus was found upon them at the site corresponding to the point of redness and tension observed the day previous. The redness had not disappeared. The parts were thoroughly irrigated with a 1–3,000 solution of hydronaphthol and redressed as before. Ten grains of sulphate of quinine were given.

On the fourth day the temperature fell to 99° F., and no further rise occurred. The drainage-tube was removed. No further discharge of pus took place. On the fifth day the entire line of incision was found to be united.

The patient was kept under observation at the hospital until the twenty-third day, when she was allowed to return to her home. She was ordered to report as an out-patient, in order that occasional passive movements of the arm might be performed. She did not reappear until six weeks after the operation, however, when she visited my office, still carrying her arm in a sling and bandage. These were removed, passive motion was instituted, which was ordered to be performed daily, and the patient was requested to attempt using the arm.

The pain present prior to the operation has entirely disappeared, and the joint is in a fair way to recover its usefulness. I believe that no greater stiffness of the shoulder joint now exists than continues occasionally for the same length of time after dislocation and reduction of the head of the humerus.

This is believed to be a new operation for facilitating the reduction of dislocation of the humerus of long standing, and it is brought forward with the hope that it may prove useful in that class of cases in which the patient's muscular and ligamentous tissues possess such firmness and tonicity as to render futile attempts at reduction without the exercise of an unjustifiable amount of force. It will be noticed that, even after several bands of adhesions had been divided, the usual method with the heel in the axilla, most faithfully and persistently tried by my esteemed colleague, Dr. F. W. Rockwell, failed; while, after complete severance of the restraining ligamentous structure, reduction was readily accomplished by the simplest manipulation, and without the use of any force whatever.

BROOKLYN PATHOLOGICAL SOCIETY.

Meeting of March 11, 1886.

(*Concluded from page 53.*)

The President, Dr. B. F. Westbrook, in the Chair;
Dr. A. H. P. Leuf, Secretary.

The Pathology and Treatment of Enlarged Prostate.—In the further discussion of Dr. Rockwell's paper (see p. 29), Dr. Andrew Otterson said that the only relief or cure was the removal of the mechanical trouble. The mechanical removal was experimental to a certain extent. He had succeeded best with a large prostatic catheter. One of the very best things he knew of was the fluid extract of hydrangia, first introduced by the late Dr. Butler, of New Jersey. As prepared by Dr. Butler, it gave more prompt and comfortable relief than any other remedy he had ever used. He had, like all others, had much trouble in overcoming obstructions. He never had the courage to use the knife. Since the advent of iodoform he had had a case of enormous enlargement nearly filling the pelvis, and by the interrupted use of iodoform it had been so reduced as to give no further trouble. This patient did not have to be aided by the catheter in over a year. He had been obliged formerly to come a distance of many miles to be relieved whenever he had retention. It was impossible for him to say whether this was the effect of iodoform in all cases. He also had had one other case. It was that of a lady whose trouble had been diagnosticated as prolapsed ovary. She was almost bedridden and very much exhausted. She had been to the best men in the city, but without avail. She recovered under the use of iodoform, and was able to get around very well. So confident was he that the success was due to the iodoform that he would use it again in a similar case. He always gave it *per rectum.*

Dr. Eccles asked, Why give belladonna when it was desirable to get a decided effect? Atropine should always be given to insure success. The battery also, unless gauged to the wet condition of platinum, would yield no result from a single flash. It was at first necessary to have the platinum dry before the flash was obtained. Resistance was necessary to make the wire hot.

Dr. Jones asked if any one previous to Dr. Newman had systematically cauterized the urethra. He also called attention to the analogy of the prostate and uterus, and the frequency of fibroids in the uterus of negresses, and wished to know if there was a similar tendency in negro men to fibroid changes of the prostate?

Dr. Rockwell said he was aware of Professor Bertini's effects with the cautery. He asked Dr. Newman how much iodide of potassium he used in his suppository. He also believed perineal cystotomy to be the coming operation.

Dr. Rockwell concluded by saying that the urethra had been cauterized by others before Newman, but not so systematically. He had never seen a case of prostatic fibroma in a negro, but then he seldom saw negroes professionally. He was familiar with the iodoform treatment, but was not favorably impressed with it. He employed it to relieve pain sometimes. He had also injected potassium iodide with the hypodermic syringe.

Fatty Heart; Pericarditis; Thrombosis of the Left Subclavian Artery and Gangrene of the Left Hand and Arm.—Dr. John Horn exhibited specimens and said that the first was removed from a female about forty-eight years of age, who had been under treatment for pneumonia for three weeks at St. Mary's Hospital, and who was on a fair way to recovery when one morning she experienced in the fingers of her left hand a peculiar numb sensation which came on suddenly; it was then noticed that her hand was becoming cold and painful; her finger-nails became blue; mottled spots appeared on the hand the next day and gradually extended up the arm to about the junction of the middle and lower thirds; there was no pulsation in the radial, brachial, or ulnar arteries; the left hand and arm gradually grew darker, and the veins of the hand soon became distended and assumed a greenish color. She was well stimulated and her arm was wrapped in cotton. Being a very nervous patient, she worried a great deal about the condition of her arm; also, being physically weak, she rapidly failed and died on the sixth day after the embolus was first noticed.

The autopsy was made on the following day by Dr. Leuf. The body was well nourished. There was no rigor mortis in the left wrist or fingers. The pericardium was adherent and there were recent adhesions between the pleura and the pericardium on both sides. The right auricular wall was thickened and the cavity diminished. The right ventricles were hypertrophied, the walls shading off into fatty degeneration. Between the layers of the pericardium there was a sack which contained a purulent fluid. The left auricle was small. There was atheroma of the aorta down to and below the abdominal portion. There was œdema with hypostatic congestion of the left lung. The lower lobe of the *right* lung was collapsed; the upper lobe was solid and appeared as if it was about to break down.

The capsule of the left kidney was slightly adherent. There was chronic interstitial nephritis of both kidneys. The liver was pale but not friable. The clot extended from the beginning of the subclavian artery at the aorta to and into the ulnar and radial arteries, where it had not broken down; it was a solid, black clot.

Tricuspid and Mitral Stenosis and Regurgitation.—Dr. Horn also related the history of the case of Eliza M., aged thirty-two, a domestic, who was working up to five weeks before admission to the hospital, when she complained of cough, and of pain in the cardiac region and head. She expectorated a dark, yellowish sputum, and had dyspnœa on slight exertion.

On admission, she had a slight elevation of temperature, was very anæmic, and slightly jaundiced, and had œdema of the feet and legs, a soft compressible pulse, and a marked carotid pulsation. The apex-beat was at the fifth intercostal space, one inch to the left of the nipple. The first sound was very feeble and was preceded by a harsh murmur. There was a distinct bellows murmur at the apex and a very feeble second sound. The urine was acid, of a sp. gr. of 1·012, and contained albumin and some granular matter, but no casts. She came to the hospital on February 27th, and was put to bed and stimulated. She felt very comfortable the next day, but became comatose four days after, and at about 1 A. M. on the fifth day after admission she died.

Autopsy by Dr. Leuf eighteen hours after death: The body was fairly nourished. Rigor mortis was well marked. There were recent pleuritic adhesions on both sides. The heart was enlarged and anæmic. The mitral and tricuspid valves were thickened and retracted. The aortic valves were slightly thickened. All of the abdominal organs were very anæmic. Both kidneys were enlarged and very fatty, and the capsules were adherent.

Cardiac Hypertrophy and Dilatation with Chronic Diffuse Nephritis.—Dr. Horn also exhibited a specimen which was taken from Henry B., forty-eight years of age, who came to St. Mary's Hospital with the following history: For several years he had been treated alternately for kidney, liver, stomach, or heart disease. About four months before, his legs and scrotum become very œdematous. He had pain in the lumbar region, dyspnœa, and orthopnœa, and he very frequently had peculiar spasms, during which his breathing would assume the character of Cheyne-Stokes respiration. These spasms rarely came on while he was conversing with anybody, but, as soon as he was alone and his attention not occupied, he would throw his head backward, close his eyes, and almost unconsciously moan very loudly for a few minutes, during which the Cheyne-Stokes breathing would occur, after which he felt relieved. These spasms had existed for some time. He passed a normal quantity of urine daily, had a poor appetite, and was very much emaciated. His urine was acid, of a specific gravity of 1·017, albuminous (one fifth), and contained hyaline and granular casts. The apex-beat was not discernible; there was a strong epigastric pulsation. He was made very comfortable with hypodermics of pilocarpine, hot baths, and infusion of digitalis, and his spasms were relieved with morphine. The quantity of albumin in the urine gradually diminished. His œdematous prepuce and scrotum were punctured, and twenty-one ounces of fluid oozed out in about twenty-four hours.

On March 6th, sixteen days after admission into the hospital, he began to fail rapidly, became cyanotic, and died quietly the next day.

On March 8th the autopsy was made by Dr. Leuf. Rigor mortis was marked. The skin of the upper portion of the body was jaundiced; there was œdema of the lower portion. The apex of the heart was located at the sixth interspace, one inch to the left of the nipple. There was hydropericardium, and the heart was enlarged and dilated and weighed twenty-one ounces. The aortic orifice admitted two fingers and there was a slight thickening. The valves seemed competent. There was atheroma of the aorta, which extended into the common iliacs. There were pleuritic adhesions on both sides. There was hydrothorax on the right side. The lower lobe of the left lung was collapsed. There was a hæmorrhagic infarction in the lower portion of the upper lobe on the inner side. The lower lobe of the right lung was also collapsed, and it contained a hæmorrhagic infarction near its outer side. There was pneumonic consolidation of the right apex. The left kidney was enlarged and weighed ten ounces and a half. The capsule was not adherent; the pelvis and infundibula were dilated. The right kidney was very much smaller and weighed two ounces and a half. It was nodular, the capsule was thickened and adherent, and its surface was granular. Both kidneys were floating. The pancreas was normal. The stomach was tubular; the pylorus was contracted and adherent to the left side of the gall-bladder and to the lobus quadratus of the liver. The liver weighed sixty-four ounces. There was interstitial hepatitis. The gall-bladder was contracted and contained one large stone and several small ones. The spleen was hard and congested and adherent to the diaphragm, and its capsule was thickened. The urinary bladder was dilated. The prostate was not enlarged.

The PRESIDENT remarked that the last case was of special interest because of the adherence of the stomach to the liver near the gall-bladder and the dilatation of the kidney, ureters, and bladder, without prostatic enlargement or stricture, and he asked what caused the retention.

Dr. HORN suggested that a marked œdema of the prepuce that was present might have interfered with the proper flow of urine.

Dr. ROCKWELL called attention to the inter-ureteric bar, composed of muscular tissue, and made prominent by muscular contraction. It was not very evident *post mortem*, although large enough very often during life to cause urinary retention. It was simply a ridge passing along the *bas fond* between the orifices of the ureters. He desired to know if it was present in this case.

Dr. LEUF replied that, in the first place, a metallic catheter of average size was readily passed through the urethra and withdrawn through the vesical orifice, thus proving the absence of any stricture likely to cause retention. In the second place, he did not believe that the œdema of the prepuce, though very great, could prevent the escape of urine, as there was no phimosis. In the third place, the prostatic angle of the urethra in this case was a very decided one. It was obtuse, of course, but measured not more than 100° or 110°, and that might prove an effectual impediment to the flow of urine during life. In the fourth place, the inter-ureteric bar was present in this case and appeared as a round ridge running from one ureteric orifice to the other, and had a diameter of about 5 mm.

Aneurysm of the Arch of the Aorta.—Dr. C. N. D. JONES presented a specimen with the following history, a portion of which was furnished by Dr. Morrel, of the Brooklyn Hospital: Alexander D., aged thirty-two, single, colored, a native of the United States, came under his observation February 4th. The patient's family history was negative. He was one of the "Jubilee" singers. He stated that about one year ago, after an evening's performance, he had noticed a dull pain in the left chest. Three months ago he had first noticed a tumor in his left infra-clavicular region, which had been slowly but steadily enlarging. The patient suffered with pain, dyspnœa, cough, dysphagia, and aphonia. Examination showed the chest-wall bulged forward by a large pulsating tumor. On auscultation, there was a double murmur, with the unmistakable aneurysmal thrill. The patient was sent to the Brooklyn Hospital, where he remained until he died, February 25th. The treatment consisted of the use of iodide of potassium and opium. Large doses of the latter were required to ease his pain. At the autopsy the heart was found to be but slightly enlarged, the valves were competent, and the muscular tissue was of normal consistence. The whole arch of the aorta was markedly atheromatous and somewhat dilated. Just beyond the origin of the left subclavian artery it was dilated into an aneurysmal sac of the size of a large orange. At the inner portion of the large sac a secondary sac was given off, extending inward and to the right, where it pressed upon and had become firmly adherent to the trachea. The smaller sac, together with the adherent portion of the tracheal wall, was firmly calcified—apparently an effort of Nature to protect herself against the encroachments of the enlarging tumor. The other organs presented no lesions worthy of note. The case was interesting because of the rapidity of the growth of the tumor and the absence of symptoms until within a short period before death.

Reports on the Progress of Medicine.

OBSTETRICS.

BY ANDREW F. CURRIER, M. D.

How shall we manage Abortion?—Hartwig ("Buffalo Med. and Surg. Jour.," Jan., 1886) coincides with the views expressed in the recent publications of Schwarz and Kleinwächter upon this subject. He considers that the subject should be treated under the heads of prophylaxis and therapy. If the prophylaxis is not begun until labor pains have commenced, the prospects of preventing abortion are not favorable. The use of morphine and antipyretics, if fever is present, is suggested as offering some hope in favorable cases. If syphilis is present, antisyphilitic treatment early in the history of the pregnancy will give good results. When abortion is threatened on account of a displaced uterus, reposition of the organ and the wearing of a suitable pessary are indicated. Reposition is, of course, not to be thought of in the presence of strong adhesions, which would demand an unnecessary display of violence. Pregnancy is not necessarily a bar to the removal of teeth which require extraction, and even operations of the magnitude of ovariotomy have been done without damage to the *fœtus in utero*. If the os uteri is eroded and nitrate of silver to be used in its treatment, it is recommended that a very weak solution (10 per cent.) be used. When expulsive pains have fairly set in, Hoenig's method of compressing the uterus through the abdomen by one hand which grasps the fundus will sometimes assist in expelling the fœtus and membranes entire. Ergot at such a time is not recommended by the author, as the os internum might be closed as a result. If post-partum hæmorrhage is troublesome or dangerous, a tamponade of absorbent cotton dipped in a 5-per-cent. solution of carbolized glycerin is advised; or the tampon may be made from a 5-per-cent. salicyl, iodoform, or borated cotton. After six hours this may be removed and the vagina syringed thoroughly with a very hot weak antiseptic solution. If the entire contents of the uterus have not been expelled, its cavity should also be thoroughly injected. The method of Boeters of scraping out portions of placenta or membranes which may have been retained with a sharp curette, this being followed by a cauterizing and disinfecting application to the mucous membrane, is commended as a rational and eminently useful measure. In doubtful cases the author thinks that the patient should receive the benefit of the doubt and of the operation. Cases and authorities are quoted in which this operation for cleansing the uterus is advocated and approved, not only in septic or hæmorrhagic conditions which follow abortions, but in similar conditions which follow delivery at full term.

The Temperature of Mother and Child at the Moment of Childbirth.—Bonnal ("Ann. de gynéc.," Dec., 1885), in a paper read before the *Académie des sciences*, says that there is no direct relation between elevation of temperature, the duration of labor, and the energy of the pains. Neither does primiparity or multiparity have any special bearing in the matter. The same is true if the presentation is of the breech or face, if also there is no marked disproportion between the volume of the child and the dimensions of the genital canal. After normal accouchements the temperature of the mother is usually 99·5° F., but it may reach 100·4°. In abnormal accouchements it may reach 109·2° F. The temperature of the child immediately after birth and before the division of the cord in normal labors generally oscillates between 99·6° + and 100·9° + ; exceptionally it falls below 99·5°. In abnormal labors it may reach 109·1°, rarely going beyond that figure. There is usually a difference of 0·2° to 0·7° between the temperature of the mother and that of her child immediately after birth, in favor of the mother. As has been frequently observed, the child's temperature becomes quickly lowered if it is not suitably covered immediately after birth. It may fall below 96·8° within thirty or thirty-five minutes. Hence the necessity that the child receive attention immediately after birth.

Continuous Irrigation in the Treatment of Puerperal Infection.—Pinard and Varnier (*Ibid.*) remark that the antiseptic method as applied to the treatment of wounds of the uterus, vagina, and vulva consecutive to parturition has yielded remarkable results, although there are still occasional deaths from septicæmia. A physician in charge of an obstetrical service, especially if it is large and public, is called upon to treat three classes of parturient women: 1. Those who have been surrounded by antiseptic precautions before, during, and after accouchement. 2. Those who have been infected by hands or instruments during their confinement, and are brought into the hospital twelve or twenty-four hours afterward—that is, before the appearance of septicæmia. This class of cases would include abortions with retained placenta, repeated and maladroit applications of the forceps, attempts at version, etc. 3. Those cases in which septicæmia is already present when the patients are received. In the first class the mortality can and ought to be zero; in the other two it may be considerable, but is susceptible of some improvement. The conditions for antiseptic treatment of the wounds which follow parturition are very unfavorable. There are not only open wounds, but wounds and granulations which are infected with micro-organisms. In addition, a discharge which consists of decomposing or decomposed matter in the form of the lochia is flowing over them; hence antiseptic treatment can be only relative. Such treatment has heretofore consisted in the intermittent use of vaginal or uterine injections, of solutions of carbolic acid which may be as strong as one to twenty, or of biniodide of mercury of a strength not exceeding one to two thousand. Though these injections are in many cases extremely efficient, their beneficial influence is less decided or does not exist at all in cases in which the system is already extensively invaded by micro-organisms, the alleged reason being that their influence is only temporary. Too little of the carbolic acid or of the mercury in solution in the injections is absorbed to counteract the influence of the poisonous germs. The theory which the author propounds in such cases is as follows: Admitting that the kidneys and liver are in a fair condition of health, it appears that the difference in the gravity of puerperal disorders depends simply upon the greater or less quantity of poisonous material which is absorbed by the utero-vaginal wound, upon the degree of rapidity with which the doses which are absorbed succeed one another. On this theory, if one acts energetically upon the traumatic fever, which is the first degree of infection, as soon as it makes its appearance, one will prevent septicæmia. If one acts sufficiently early and with sufficient energy upon the septic endometritis which ensues, one can prevent or arrest lymphangitis, peritonitis, and phlebitis. The important point in all cases is the amount, together with the more or less profound degree of penetration, of the septic agent. The conclusion from the foregoing propositions is that continuous irrigation of the utero-vaginal canal would accomplish a means of treatment which is both antiseptic and rational. This conclusion has been reached, notwithstanding the discredit into which this method fell after a brief trial, and the objections that it is impracticable, useless, and even dangerous. The published experience of Sneguireff, of Moscow, shows that the method is both practicable and safe. Complicated apparatus for carrying out the method is not necessary, and the author's experience warrants him in recommending it.

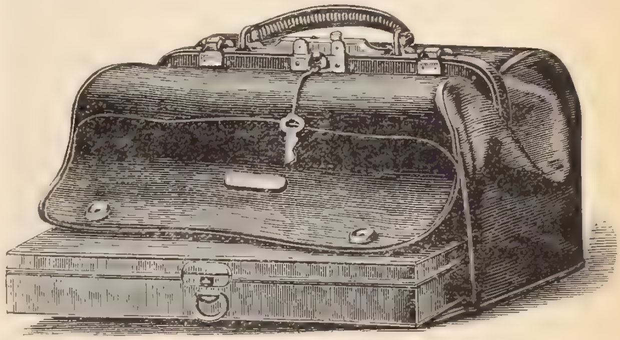
New Inventions, etc.

AN EMERGENCY OPERATING BAG.

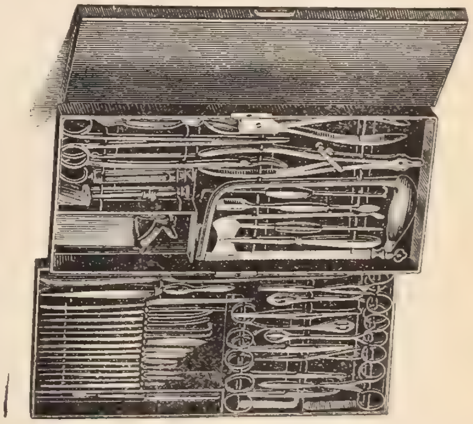
By W. S. Tremaine, M. D.,
SURGEON, U. S. ARMY.

For some time it has seemed to me desirable that surgeons, who are liable to be suddenly called by day or night, should have an operating case, in convenient and portable form, supplied with all the instruments likely to be used in any operation of emergency, such as amputation, kelotomy, tracheotomy, etc.; and, moreover, in these days of antiseptic surgery, that the case in which the instruments are kept should have no absorbent material to become contaminated.

Any ordinary traveling satchel can be fitted to contain the instrument case. The sample case, which was made by Messrs. George Tiemann & Co., of New York, is shown in the accompanying cut. The instruments are contained in a box made of spring brass, nickel-plated or gilt, and fitted with metal racks. The box contains the following instruments, some of which are new in pattern:



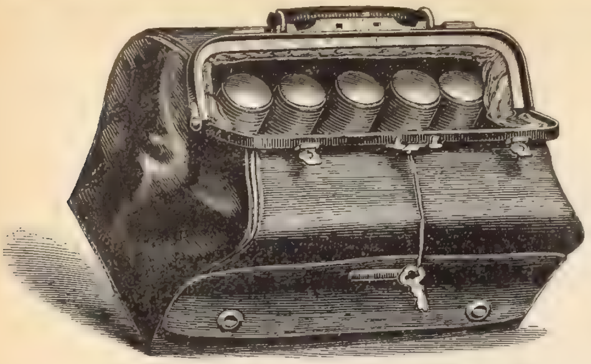
One amputating knife, 1 Sands's periosteum knife, 1 metacarpal saw, 1 finger knife, 1 Cooper's hernia knife, 1 probe-pointed bistoury, 1 aneurysm needle, 1 tenaculum, 1 large scalpel, 3 smaller scalpels, 1 curved bistoury, 1 sharp-pointed tenotome, 1 blunt tenotome, 1 eye spud, 6 hæmostatic forceps, 1 bull-dog forceps, 1 Olds's scissors forceps, 2 Tremaine's hare-lip clamps, 1 Tremaine's ratchet trephine, 1 small aspirator, 1 sequestrum forceps, 1 bone forceps, 1 needle forceps, 1 pair Tremaine's retractors, 1 Tremaine's saw (2 blades), 1 elevator, 1 tracheotomy tube, 1 director, 3 silk or catgut spool cases (Tremaine's), 1 needle case, 1 long uterine scissors, 2 probes.



A still more compact and less expensive case can be made by leaving out some of the instruments which are duplicated in the pocket case.

The spool cases of hard rubber will especially commend themselves, as also the hare-lip clamps.

The interior of the bag is fitted with metal-cased bottles to contain chloroform, antiseptic solutions, catgut ligature, etc., at the pleasure and preference of the surgeon. It also gives plenty of room for additional non-cutting instruments, with a package of antiseptic gauze, sponges, Esmarch's bandage, etc.



After many years of experience of the needs of the surgeon in military, civil, and railroad practice, I believe this case will fill every need of the operating surgeon in any emergency. As such, I present it to the profession. Of course the instruments can be varied to suit the needs of the surgeon.

To military surgeons accompanying detachments of recruits or scouting parties, to "railroad" surgeons called suddenly to an accident, the idea of having all needed instruments and dressings always ready in compact and portable form will especially commend itself.

To the operating surgeon, who knows beforehand what operation he is about to perform, the additional instruments, such as lithotomy staff, ovariotomy trocar, additional hæmostatic forceps, etc., can easily be selected from his cases and put into the upper part of the bag.

449 Washington Street, Buffalo, N. Y.

Miscellany.

Dr. Oliver Wendell Holmes in Edinburgh.—The "Lancet's" Edinburgh correspondent, writing under date of June 29th, says: "Dr. Holmes's visit to Edinburgh has partaken largely of the nature of an academic triumph, and not only has he been most warmly welcomed by all connected with the University, but his presence in the city has excited great interest among the very many who, as members of the reading community, have come in contact with his writings. On Friday afternoon the honorary degree of LL. D. was conferred upon him in the Upper Library Hall of the University by the Chancellor, Lord Inglis. The hall was crowded for the occasion, there being a large number of ladies present in reserved seats and in the galleries, while the body of the hall was occupied by visitors and a considerable number of students. On entering the hall, Dr. Holmes was greeted with enthusiastic cheering, which was from time to time renewed as the ceremony proceeded. Professor Kirkpatrick, Dean of the Faculty of Law, delivered a short address of the customary nature, in presenting Dr. Holmes to the Chancellor for promotion to the degree. He shortly referred to the leading events in Dr. Holmes's career, and enumerated the names of some of his best-known writings. After Lord Inglis had completed the ceremony of 'capping' the Autocrat, the latter signed the roll-book of honorary graduates of the University, and then, in response to urgent cries of 'speech,' he addressed a few words to the students, thanking them for the warm reception they had accorded him, and expressing the gratification he had experienced in enacting his part in that day's ceremony. The meeting terminated amid renewed cheers for Dr. Holmes and the singing of 'For he's a jolly good fellow.' On Saturday evening the students held a concert in honor of Dr. Holmes, at which he was present. Professor Crum Brown occupied the chair. and the Queen Street Hall, which was taken for the occasion, was crowded with an interested audience of students and their friends, After the first part of the programme had been concluded, Dr. Holmes was presented with an address from the students welcoming his visit to Edinburgh, and expressing their earnest appreciation of the value of his writings. In replying, Dr. Holmes sketched an interesting outline of his own career, and in particular he dwelt upon the relation which existed between the literary and professional portions of his life-work. In this connection he gave important advice to young men who have a passion for literary labors. Literature, he said, was a good staff for walking with, but not a good one to lean upon. He had early received an important piece of advice from the lips of Coleridge, that every literary man should have as well some fixed and regular occupation; this advice he handed on to any one who might feel tempted to exchange steady preparation for a practical career for the uncertain pathway of a literary life. In concluding his remarks, Dr. Holmes thanked the students for the brilliant reception they had given him, the memory of which would be a lasting and inspiring pleasure to him for the remainder of his life."

"Referee" and "Co-referee."—A correspondent wishes to learn the meaning of these terms as used in the programme for the recent meeting of the Association of American Physicians. We do not know, but we presume that whoever coined them intended to make equivalents of the German *Referent* and *Co-Referent*, meaning a reporter and an associate reporter.

The New York State Medical Association.—The Fifth District Branch will hold its second annual meeting in Brooklyn on the 12th of October. The secretary, Dr. E. H. Squibb, P. O. box 94, Brooklyn, desires early notification of the title of any papers to be offered.

The Health of Michigan.—According to returns made to the State Board of Health for the month of June, diphtheria was reported from forty-seven places, scarlet fever from forty-eight, typhoid fever from six, measles from sixteen, and small-pox from three.

Sir James Paget, we learn from the "British Medical Journal," has been elected a foreign associate of Paris *Académie de médecine.*

THERAPEUTICAL NOTES.

The "Diffusion Electrode" in the Treatment of Neuralgia.—Dr. Albert Adamkiewicz ("Neurol. Ctrlbl.," 1886, 10; "Breslauer ärztl. Ztschr.," June 26, 1886) has sought to heighten the anodyne effect of the anodal galvanic current by the use of medicinal liquids contained in a hollowed electrode (*Diffusionselectrode*) connected with the positive pole. It is stated that when the current is passed the liquid penetrates the skin by cataphoresis. When chloroform is used in this way, local anæsthesia is rapidly induced.

Cacur.—Atkinson ("Edinburgh Med. Journal," July, 1886) describes this as a small apple, the fruit of the *Cucumis myriocarpus*, used as an emetic by the Kaffirs of South Africa. The juice and pulp of a single fruit are sufficient to produce emesis in a child. Twenty grains of the pulp cause nausea in an adult within half an hour after their administration. In smaller doses it acts as a cholagogue purgative.

Menthol in Urticaria and Pruritus.—Menthol, in solutions containing from two to ten grains to the ounce of water, is recommended by the "Pharmaceutical Journal" for May 16, 1886 ("Edinb. Med. Jour.," July, 1886), as a valuable application in cases of pruritus, with or without eruption. When applied to the affected spot, this solution affords almost immediate relief from the itching or burning.

A Compound Tincture of Capsicum for Local Use.—Poulet ("Bull. gén. de thérap.," 1886, No. 3) recommends the following preparation as absolutely free from irritating properties:

℞ Tincture of capsicum..................	200 parts;
Ammonia water........................	100 "
Essence of thyme, } each...............	10 "
Chloral hydrate, }	
Alcohol (60 per cent.).................	1,000 "

This combination is highly recommended as a local application in rheumatism and neuralgia.

Iodoform in the Treatment of Aphthous Inflammation of the Vulva is highly recommended by Sarazin ("Union méd.," June 29, 1886). The affected parts are covered, without previous cleansing, with a thick layer of powdered iodoform, and charpie is inserted between the labia majora. The dressing is to be renewed every day.

THE NEW YORK MEDICAL JOURNAL, July 24, 1886.

Lectures and Addresses.

LECTURES ON
THE DIAGNOSIS AND TREATMENT OF DISEASES OF THE CHEST.

DELIVERED BEFORE THE ASCLEPION CLUB,

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Lecture I.

General Diagnosis and Therapeutic Indications in Acute Diseases of the Lungs.

Gentlemen: It is a fundamental rule of diagnosis that its object is twofold—first, to ascertain the presence and nature of any local disturbances which may exist, and, second, to investigate the remainder of the body in order to determine the extent to which either the general condition of the patient or particular affections of other parts may modify the prominent lesion. In considering constitutional diseases—the essential fevers, for instance—this rule may be reversed and the diagnostician required, first, to point out the general disease, and then to identify the local complications, should any exist. The relations of each organ or part of the body to all the rest are such that we can not afford to ignore this rule; for even those morbid conditions which are, to all appearance, entirely limited, such as slight bruises, contusions, or wounds, may be followed by the most disastrous consequences if the rest of the organism is not in its normal condition.

The importance of this statement is nowhere more perfectly exemplified than in the acute and chronic diseases of the respiratory apparatus.

The diagnosis must be made not only with reference to the prominent local lesion—which may be called the classifying lesion—but also to the general habit or constitution of the patient, and the condition, particularly, of his respiratory and circulatory apparatus.

We know, *e. g.*, that the character of inflammatory processes in the respiratory tract is influenced to an important degree by the co-existence of a phthisical tendency. Diseases which in other persons would run a favorable course and end in recovery, or at least tend to do so, will, in the person of one who has inherited the consumptive habit, be altered in their course, and, if our therapeutic efforts are not successful, shade off into chronic and incurable processes. The gouty and rheumatic diatheses predispose to congestions, particularly of the mucous membranes, and render them more intractable than they would otherwise be. Diseases of the circulatory apparatus, particularly those of the heart, have an influence whose malignity is too well known for it to be necessary for me to do more than allude to it. As for the respiratory tract itself, we should ever bear in mind that the course of the acute disease with which we have immediately to deal will be affected by the previous existence of other pathological conditions. An acute inflammation will, for instance, be worse in one who is already emphysematous than if the lungs were previously normal. Pneumonia ingrafted upon phthisis is likely to result unfavorably either as regards the life of the patient or the rapidity of extension of the phthisical process. And many other examples might be cited to illustrate the necessity of determining not only the nature of the disease, but *the kind of lung in which it is found.* These points are of value, not only as guides to the intelligent treatment of the disease, but also because they enable us better to calculate the chances for or against our patient. The art of prognosis is founded upon the art of diagnosis. For the one to be reliable, the other must be exact and comprehensive.

The acute diseases of the lungs are largely vascular disturbances, and their consideration may be advantageously prefaced by a cursory allusion to the anatomy and physiology of the pulmonary circulation.

The important anatomical facts are, first, that the vascular supply of the large and medium bronchial tubes is distinct from that of the bronchioles and pulmonary lobules, though their anastomosis is such that injections, as shown by Dr. Waters, may pass from one set of vessels into the other. So that intense bronchial engorgement may exist with little or no pulmonary hyperæmia, while, on the other hand, extensive pneumonitis may occur and be associated with little or no bronchitis.

Second, the capillaries of the lung are so distributed in the walls of the alveoli and connective tissue of the lobules that the blood flows through them most easily when the lung is expanded, though fixation of the thorax in the position either of inhalation or of exhalation impedes the pulmonary circulation.

Third, the vessels of the lung differ from those in the body at large in that, whereas in the latter the veins far exceed the arteries in capacity, in the former they are of the same caliber.

It results from this that, if the pressure in the veins is increased, the change is felt immediately in the artery, provided the tone of the smaller vessels is not decreased. The capillaries and smaller arteries and veins are, however, capable, when relaxed, of containing three or four times the quantity of blood which they ordinarily hold.

Here, as in all the viscera, the vascular tonus is the great and all-important factor in the circulation. This, regulated by the nerves of the pulmonary plexuses, in association with those of the heart, and under ordinary circumstances, varies slightly from time to time, according to the needs of the organism. Under abnormal conditions, the vascular tone may be lost, either throughout the pulmonary system or in certain parts of it, and congestion ensues.

Pulmonary congestion, then, the first of the acute pulmonary diseases to attract our attention, is a vaso-motor disturbance, of greater or lesser extent and intensity, whose gravity depends upon the nature of the exciting cause and the condition of the patient, both local and general. Without attempting even to enumerate all the causes of this condition, we may say that, with the exception of those cases which are directly due to cardiac disease, the most important to the diagnostician are the *predisposing* causes, because these so often exist in the body of the patient and must be dealt with therapeutically.

Pre-eminent among them stands alcoholism. The effect of alcohol when taken in excessive quantities is to paralyze the vaso-motor apparatus and induce various visceral congestions. This effect is most marked when the condition of chronic alcoholism results from continued abuse of the drug. The vascular tone is lessened, and, under the depressing effect of cold or of fatigue, or both combined, the most grave disturbances occur. The appearance of the patient generally furnishes sufficient evidence to establish the case. Another frequent cause of grave pulmonary congestion is chronic nephritis. Here, too, the vascular nervous mechanism is at fault. The attacks may come on suddenly, and, after the most alarming symptoms have prevailed for a short time, they may as rapidly disappear. This course is peculiar to Bright's disease, and is itself an important diagnostic indication of that affection. In these cases the renal disease, or, to speak more correctly, its associated nervous disorders, is the direct cause of the pulmonary congestion. In other instances the vascular apparatus is simply prepared for a catastrophe, and exposure to cold or gastro-intestinal irritation is the determining factor.

The gouty and rheumatic diatheses also act as predisposing causes to pulmonary congestion, and should always be recognized and properly dealt with. In fact, a simple dyspeptic condition, an acute gastric catarrh, or the state vaguely known as biliousness, may be the underlying cause.

Plethora is said to predispose to congestion and inflammatory affections, but it may be rather the gouty or rheumatic tendency so often associated with it which is responsible for the mischief.

The diagnosis of pulmonary congestion is based upon symptoms and physical signs. The feeling of the patient is that of oppression or tightness in the chest, with dyspnœa, languor, and malaise. These sensations are more or less pronounced in proportion to the gravity of the case. When the congestion is slight, there may be simply an uneasiness about the thorax, with perhaps an aching or dull pain, most frequently situated below the scapulæ. The dyspnœa may only be apparent on exertion, and then the patient himself may not distinguish it from his general feeling of distress. But the quick eye of the diagnostician will recognize it in the increased frequency of respiration which accompanies even so slight a movement as taking off the under-garment. If more severe, the feeling of constriction or pressure becomes distinct, and dyspnœa is complained of. In very aggravated cases, following upon alcoholism or excessive fatigue with exposure, the congestion is not limited to the lungs, but invades the other viscera, and the patient becomes rapidly comatose and moribund. The objective signs of pulmonary congestion are increased frequency of respiration; cough, dry at first, afterward moist, if a stage of secretion is reached; increased rapidity of pulse; usually a slight elevation of temperature. The expectoration, when it occurs, will be simply that of the accompanying bronchitis, unless the congestion be so considerable, or the condition of the patient such—as in Bright's disease, hydræmia, or chronic alcoholism—as to give rise to œdema. When this occurs there will be more or less blood in the sputa. The characteristic sputum of œdema is a bloody serum. When œdema occurs with a moderate amount of congestion, the blood is scanty; but when the engorgement of the lungs is very great, as it is in the early stages of the pneumonia of drunkards and other asthenic subjects, it may give quite a dark red. The prune-juice expectoration of asthenic pneumonia is indicative of great venous engorgement, with some œdema.

On examining the chest, if the disease be of moderate severity, the percussion note anteriorly will be either unaltered or more than normally resonant, while the respiratory murmur retains its vesicular quality, but is rather louder than usual. Posteriorly and below the middle of the scapula the resonance elicited by percussion is diminished, usually to an unequal degree, upon the two sides, while the respiratory murmur is much less distinct than normal. Deep breathing almost always produces some small mucous râles. To recognize these signs of moderate congestion, the observer must have had some training, and particularly must be familiar with the differences which exist between normal chests.

The congestive stage of acute croupous pneumonia is not always to be distinguished, but it is usually characterized by a chill, higher temperature, more rapid and forcible pulse, and greater flushing of the face. Besides, unless a double pneumonia is about to intervene, the percussion dullness and suppressed respiratory sounds are limited to one side.

If the case is severe, there will be an exaggeration of all the symptoms mentioned, except that the temperature is not high, and the pulse is weak and rapid. In very adynamic cases subnormal temperatures are found. The dyspnœa becomes so intense that the patient is cyanotic, the cough is feeble and ineffectual, and the small and few mucous râles which were heard at first at the bases of the lungs are become more numerous and loud, showing that the general bronchial system is filling up with mucus. During the agony the surface becomes pale, cool, and damp, the nose and lips are cold, and loud tracheal râles proclaim the approach of death. In some of the most severe and rapidly developing cases, such as have been described by Dr. Leuf in his paper on pulmonary congestion in a recent number of the "American Journal of the Medical Sciences," the fatal event is so soon reached that there is no time for the development of the ordinary symptoms. It would appear that the capillaries dilate to their fullest extent, and the blood flowing in so completely obstructs the air-passages that the patient dies immediately from asphyxia.

The *prognosis* in pulmonary congestion will depend upon the individual affected, the nature of the cause, and the complications. As to the individual affected, if he be old or enfeebled from any previous disease or dissipation, if he be of an originally feeble constitution, or if that variety of plethora known as excrementitious prevail, the outlook is serious. The gravest cases are those which occur in drunkards or debauchees and in those who are fat, flabby, watery, and usually plethoric. The latter class owe their peculiar condition to a want of vascular tone, consequent upon long-continued disturbances of nutrition. Their respiratory power is slight in proportion to their weight, and the circulation is feeble and inefficient. The subjects of Bright's disease are always liable to œdema of the lungs, and this may be at any time precipitated by the congestion which follows a cold, fatigue, injury, or acute indigestion. The gouty and rheumatic diatheses are not so dangerous, because more amenable to treatment. A congestion of the bases of the lungs often accompanies acute articular rheumatism. It is not usually a very dangerous complication if the primary disease can be controlled.

The *treatment* of this condition will vary in accordance with the collateral diagnosis. The more sthenic forms, in which the pulse is full and strong, the face flushed, and the vaso-motor paresis not well marked, are to be treated by revulsives, and by attention to the chylopoiëtic system, which is sure to be deranged. The first indication is to be met by sinapisms or turpentine stupes to the chest, particularly its posterior aspect, or by dry cupping and the use of hydragogue cathartics. The best of these is mercury in combination with jalap, or followed by a saline. This not only acts as a derivative, but also as a preliminary measure in the treatment of the digestive tract. It should be followed by a free exhibition of the mild alkalies. The bicarbonate of sodium, in pretty full and frequently repeated doses, acts well. It may be combined with small doses of calomel—say, one twelfth of a grain—every two hours. If the tongue is very red and coated, the salicylate of sodium, either alone or in combination with the bicarbonate or with calomel, gives the best results. The diet should be reduced to a minimum, and be such as requires a minimum of digestive power. It should consist of small and frequent doses of skimmed milk, with a fourth part of lime-water, of peptonized milk, or weak beef-tea.

Should the case be asthenic, the purge is still indicated, and must be followed by the exhibition of nux vomica, digitalis, or turpentine. A combination of all three will usually act better than one alone. For the local revulsion, turpentine stupes are better than mustard, and dry cupping is frequently better than either. In adynamic cases, particularly in alcoholic subjects, the alcoholic stimulants are of great therapeutic value. The question of blood-letting is a difficult one to treat at the present day, when we have so little experience with it. The evidence of the older writers is not of much value, because it was their habit to bleed promiscuously, and, if they were right, we ought nowadays to lose the greater part of our patients. There seems to be little or no reliable information upon the subject. It would appear reasonable to suppose that very acute cases in robust subjects, when the congestion results from a violent cold, from immersion in cold water, or from the action of the marsh miasm in congestive chill, bleeding, either general or by means of wet cupping, would be of great service.

Whether it would be of equal advantage in alcoholic cases, or those in which the vaso-motor paresis is due to nervous exhaustion from excessive fatigue or other depressing influences, is very doubtful. Its employment is deprecated by all authorities on the subject. In the acute and very dangerous congestion which occurs as a result of cold in those suffering from mitral stenosis it is worthy of a trial. But the result of a case of the kind in which I aspirated the right heart, and which was reported at a recent meeting of the Pathological Society,* would seem to show that, if bleeding is resorted to at all in such cases, it should be done early and before the brain is so overcome by prolonged venous engorgement that the pneumogastrics (?) can no longer control the contractility of the pulmonary vessels.

In these severe and desperate cases the digitalis and nux vomica are better administered hypodermically, and the alcohol and food by the rectum.

The acute inflammatory diseases to which I shall direct your attention are bronchitis, broncho-pneumonia, and croupous pneumonia.

Of *acute bronchitis* of the larger tubes I shall have but little to say. The diagnosis of the local disease is so simple as to scarcely admit of a mistake. There are, however, some things to be observed about the patient which will materially affect the prognosis and treatment.

In infants and the aged there is always danger of an extension to the capillary tubes and alveoli. For this reason greater attention must be paid to primarily *slight* bronchial affections in these subjects than they would *otherwise* demand. It is safe to say that the great majority of cases of capillary bronchitis and broncho-pneumonia, of simple inflammatory origin, might be prevented by prompt and efficient treatment of the condition which precedes it.

The early exhibition of a cathartic, mild and continuous counter-irritation by the application of oakum, spice-bags, tincture of iodine or irritating liniments to the chest, and quinine, either in an acid solution or with the bicarbonate of sodium, according to the condition of the stomach, will usually be sufficient to break up an acute bronchitis of ordinary severity.

Such patients should always be kept in an equable and moderate temperature and a moist atmosphere, and should not be compelled, as they frequently are, to inhale air that has already passed through one room and a Baltimore heater, or other similar abomination. When no fever is present, the quinine may be omitted and a simple expectorant employed.

The acute bronchitis of adults is frequently associated with a dyspeptic condition, or with the rheumatic or gouty diathesis. When such is the case, the ordinary routine treatment should be dispensed with, and the underlying and predisposing condition eliminated. A mercurial purge, or one containing podophyllin, euonymin, or other vegetable cholagogue, should be given, and followed by the administration of the alkaline sodium salts, or chloride of ammonium with nux vomica, if the patient has much gastro-intestinal catarrh. For the gouty diathesis the usual remedies—iodide of potassium and colchicum—should be given; and, if the patient is evidently rheumatic, the salicylates or, in some instances, dilute mineral acids. Small doses of hydrochlorate of morphine, or codeine, with dilute hydrocyanic acid, will mitigate the cough without disturbing the stomach. The nauseating syrups should be reserved for those cases of simple cold in which the patient is otherwise well.

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* "N. Y. Med. Jour.," April 17, 1886, p. 447.

Capillary bronchitis is almost always secondary to tracheo-bronchitis. In the majority of cases it is associated with an infectious disease—either epidemic influenza, whooping-cough, measles, or diphtheria—and its gravity will depend greatly upon the nature of the infection.

When it results from the inhalation of the diphtheritic poison, it is probably always fatal. When measles is the cause it is less fatal than when of diphtheritic origin, but still very grave. In whooping-cough it is a little less serious, and in influenza still less so. But the prognosis, even in simple inflammatory cases, is always doubtful.

The relations of capillary bronchitis to lobular pneumonia are so intimate that they may most profitably be considered together. Lobular or broncho-pneumonia is the last step in the progression of the catarrhal inflammation from without inward.

Beginning in the larger or medium-seized tubes, it gradually extends toward the pulmonary alveoli. At any point in its course the progression may cease, and the type of the case will vary with the limitation of the inflammation.

The less severe cases are those in which the morbid processes stop short of the lobular bronchi, and the tubes are not sufficiently occluded to prevent the circulation of air.

They are characterized by great dyspnœa, manifested by increased frequency of the respirations, paleness or lividity of the surface, and considerable prostration. The respirations in children run up to from 60 to 100 a minute, while the pulse is rapid and somewhat small, its character varying with the degree of exhaustion. The lividity may not at first be very apparent upon the face, but can always be seen by examining the finger-nails. An inexperienced observer might be deceived in regard to the degree of prostration, because of the restlessness and jactitation of the sufferer. The majority, however, are quiet. The physical signs are those of acute general bronchitis—increased resonance of the anterior and superior portions of the upper lobes, with no marked change on percussion elsewhere; and, in addition to others, the fine, subcrepitant râle. The chest expands pretty freely. The cough is not so violent as in tracheitis or tracheo-bronchitis. In the case of old people the respiration and pulse are not so rapid; indeed, the former is sometimes, in very adynamic cases, but very moderately accelerated. The breathing in all cases has somewhat more of effort connected with it than it has in lobar pneumonia.

In another class of cases the swelling and the accumulation of viscid mucus so interfere with the passage of the aërial tide that some of the bronchi are, practically, obliterated. The lobules to which they lead, receiving no air from without, gradually lose what they already have, either by absorption of it, or through the inequality of the expiratory and inspiratory forces, and their collapse is the result. The occurrence of this accident may be recognized by observing an increase of the dyspnœa and cyanosis, increased labor in breathing, and by the impediment to expansion of the lungs. As the bony thorax expands, the intercostal spaces, particularly in the lower regions of the chest, sink in, and the contraction of the diaphragm draws inward the lower costal cartilages, the ensiform appendix, and the epigastrium.

If the collapsed areas are extensive, a dampening of the percussion resonance occurs and the vesicular murmur disappears. The auscultatory signs are obscure, and only to be recognized by one who has become familiar with them through practice.

In the third class the inflammatory process extends to the alveoli, and we have the development of splenization and hepatization of the lobules. This is usually accompanied by a rise in the temperature, and, if the affected lobules are sufficiently numerous and become fused into a solid mass of considerable size, dullness on percussion, bronchial breathing, and bronchial voice announce the fact to the diagnostician.

When the pneumonic patches are scattered, the diagnosis can only be made by taking note of the increased gravity of the symptoms, the rise in temperature, and an alteration of the respiratory sounds which is difficult to describe and can only be recognized by the trained ear. In fact, it is at times only possible to suspect it, without being able to make a positive diagnosis. This broncho-pneumonic inflammation is most likely to occur in association with the infectious diseases.

This description of capillary bronchitis and its results is in accordance with the views of Professor Germain Sée,* and is adopted by me because of its harmony with my own ideas, founded upon clinical experience and the results of post-mortem investigation.

Broncho-pneumonia in the young and middle-aged adult is of rare occurrence and less grave import.

In the treatment of capillary bronchitis and broncho-pneumonia there are two important indications to be met: First, to combat the inflammatory process in the bronchial mucous membrane; second, to sustain the heart.

To combat the bronchitis, we must, in the first place, make use of counter-irritants, or revulsives, both internal and external. Internally, at the beginning of the attack a cathartic should be given, its activity to be proportioned to the vigor of the patient. The most useful of them all is calomel, in a dose sufficient to relax without actively purging. The salines are out of place in this affection; and, should we not give calomel, rhubarb and soda, or castor-oil, is the best for children, and the various warm vegetable cathartics for adults. Externally, the counter-irritation should be made with mustard, turpentine, or a stimulating liniment. Flaxseed poultices with mustard may be used, but their weight is objectionable when the breathing is very laborious. The frequent application of mild turpentine stupes is probably the best. In spite of the opinion of some distinguished writers, I can not but think that blisters are the worst form of counter-irritation. If small, they do very little good, while, if large, they inflict an unnecessary amount of suffering upon the patient, and tend to increase the depression of the vital powers. With infants they should, in my opinion, never be used.

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* "Des maladies spécifiques non-tuberculeuses du poumon," Paris, 1885.

The patient should be kept in a well-ventilated apartment, in a moist atmosphere, and not too warm. It is a frequent practice to maintain the temperature of the room in which a child with capillary bronchitis lies at 80° to 90° F., or even higher. *I believe that no good can be accomplished by this, and am confident that I have seen it do great damage.* In febrile diseases generally, it is unwise to surround the sick one by a heated atmosphere, and why an exception should be made in the case of so debilitating a disease as capillary bronchitis I do not know. If it have any soothing effect upon the bronchial tubes, which is very doubtful, this must be more than outweighed by its relaxing effect upon the nervous, muscular, and vascular apparatus.

The diet in this disease should be nutritious, but such as can be most easily digested, and it should be given in small quantities. Peptonized foods may be of great service, but should be given moderately.

The bronchial inflammation may also be favorably modified by certain drugs. If the stomach will bear it, quinine is probably the most efficacious. Its remarkable effect upon the lungs is probably exerted through the vaso-motor nervous system. It tends to diminish secretion without increasing the swelling of the mucous membrane. It also acts as a stimulant to the cerebro-spinal axis, and reduces the temperature.

Another agent which, in my hands, has appeared to have a very beneficial effect in simple inflammatory capillary bronchitis and broncho-pneumonia, the only forms in which I have used it, is antipyrine. I have given it dissolved either in water, with the syrup of tolu, or in equal parts of an elixir of calisaya and Curaçoa cordial. In small doses, say two or three to five grains, every three hours, to a child under five years old, it appears not only to reduce the temperature, but to allay the local inflammation. It may be alternated with some mild alcoholic stimulant. If the secretion is not too copious, the iodide of ammonium is valuable. It may be combined with a small dose of paregoric—just enough to soothe the nervous system and quiet the cough, if it be harassing and ineffectual; and the aromatic spirits of ammonia, glycerin, and water complete the mixture. I prefer glycerin to the syrups, as the latter tend to derange the stomach by their fermentation.

To sustain the action of the heart we have various means, but, unfortunately, they are sometimes difficult to administer to children.

In spite of its disagreeable taste, turpentine agrees better with the stomach than does digitalis. An emulsion of turpentine, with acacia, and flavored with a few drops of oil of wintergreen, will usually be retained. Digitalis may be combined with it; or, should this disagree, belladonna in small doses will take its place. Though I have not yet tested it with children, I should think that the *Cactus grandiflorus* might be of service. It is not bitter, and is less prone than digitalis to produce nausea.

Besides these two primary and constant indications, there are others which present themselves from time to time. Should the bronchial tubes be filled with secretion, it may be, and frequently is, necessary to give an emetic. The best is alum, a teaspoonful of the powder. Ipecac is next best. The mineral emetics are too depressing for use in this disease, as their action is difficult to limit.

Apomorphine has been recommended, and its action is certainly prompt and effectual. It has, too, the great merit of being available for hypodermic use. But, unfortunately, cases have been reported in which very alarming depression followed upon its administration, so that we scarcely dare risk it in the treatment of a malady which produces such great exhaustion as the one we are discussing. In minute doses, however, say $\frac{1}{120}$ grain, it is highly recommended for its effect upon the bronchial inflammation.

The temperature in this disease rarely mounts so high as to render the antipyretic treatment necessary.

Should it do so, the cold pack, or the cautious administration of antipyrine, would be the best measure to adopt for its reduction. The cold douche is too violent for an infant. It has been recommended as a means of provoking deep inspirations and preventing or overcoming pulmonary collapse, but it would seem to be of very questionable utility, inasmuch as the fright and arterial disturbance produced by subjecting a child, or other feeble subject, to such an ordeal would probably more than overbalance any good that might arise from the stimulation of its respiratory center by this means. I believe that a person suffering from so serious a disease as this should be kept quiet and as comfortable as possible, all nervous irritation soothed, and the strength in every way conserved for use in the strenuous respiratory and circulatory efforts which are constantly demanded.

Acute lobar pneumonia differs from the lobular form in several essential particulars. In the first place, it runs a definite course and tends toward recovery. We know, as soon as the diagnosis is settled, about what we have to expect, and can prepare the patient for its coming. In the second place, the inflammation affects the lobular structures primarily, and is not necessarily associated with bronchitis. The third distinction, and a very important one, is that it appears in most cases in the bodies of healthy subjects, or, at any rate, is a more sthenic disease, though there are cases of asthenic pneumonia occurring in weak persons and running an atypical course. In the fourth place, while it may hereafter be proved to be, of itself, an infectious disease, still it is not caused by such infective diseases as those which give rise to broncho-pneumonia. Finally, it is distinguished by its frequent association with acute pleurisy.

Lobar pneumonia is found, in the majority of cases, in persons whose health is already somewhat deranged. There is a predisposing cause. There is, I believe, some such derangement of nutrition as occurs in those suffering from gastro-intestinal catarrh, biliousness, and the relaxed vascular tone of those whose bodies contain too much fluid, and in whose blood substances are circulating which ought to be excreted, but are not. Gourmands and those who, in connection with an improper diet, partake freely of alcoholic stimulants, are particularly prone to this disease. So are persons who, from overwork, mental strain, or confinement in an impure air, experience a relaxation of the tissues generally. The malarial toxæmia also predisposes to this disease, probably through the disturbance of the liver and other digestive organs produced by the paludal miasm. I mention these causes particularly, because upon their recognition and treatment the fate of the patient will very largely depend.

It appears from this that it is very important to make an early diagnosis of the local disease and general condition of the patient. By so doing, we are enabled to eliminate some very injurious complications, and often to save the patient's life. For, when the disease has progressed to the dangerous point, there is no time to deal with the collateral troubles.

The congestive stage may be distinguished, if not positively at least with considerable certainty, from simple pulmonary congestion by the occurrence of a more marked chill, by a higher temperature, by the sense of pain or uneasiness being usually confined to one side, and by the unilateral situation of the physical signs. If the diagnosis is not positive, the course of treatment should be arranged as if it were, for it corresponds pretty closely to the treatment of ordinary pulmonic congestion. If the patient can bear it, measures should at once be taken to move the bowels and to keep them considerably relaxed. By this means we secure, to some extent, a redistribution of blood, lessen the inhibitory effect of the irritation of the splanchnic plexuses upon the pulmonary vaso-motor mechanism, and help to reestablish the normal equilibrium between the circulations in the various parts of the body. At the same time, if the digestive organs require any further treatment, it should be attended to.

The most important measure in this direction is to make the diet such that it can be very easily digested and assimilated. The temptation to cram food into an asthenic patient should be resisted, as these are the very ones where digestion is apt to be inadequate. The diet should be fluid, and given frequently in small quantities. It is unnecessary for me, before such an audience as this, to go into the details of feeding.

If blood-letting is ever to be resorted to, it should be in this stage of the disease before any exhaustion occurs, and while the vessels of the pulmonary system are yet capable of contracting to their normal caliber. In high livers, and those who make blood rapidly, it might be of great service.

Alcoholic stimulants should not be administered in this stage unless the patient has been accustomed to their free use. The simple fact that a man has been accustomed to drink occasionally, or moderately, does not call for any exhibition of alcohol in this stage of the disease. But it should not be withheld from those who have become so accustomed to its stimulating action that they become relaxed and depressed when not under its influence. To them it should be given in regular doses, the same as the other medicine, and care should be taken to limit the amount to that quantity necessary to bring the pulse up to the usual physiological standard. Anything in excess of this is positively injurious.

The vascular system should be treated in accordance with the constitution and needs of the patient; some require arterial sedatives and some arterial excitants.

Another important matter to be attended to as early as possible in every case of pneumonia is counter-irritation over the chest, anteriorly and posteriorly. This is done for the purpose of combating the tendency to bronchitis.

By adopting the course indicated in the first stage of the disease, we take the preliminary steps toward obviating the three great dangers of the stage of hepatization—viz., the excessive accumulation of mucus in the bronchial tubes, collateral congestion and œdema from failure of the heart, and exhaustion.

In the stage of hepatization the most important function of the diagnostician is not to simply ascertain the existence of the disease, but to investigate the factors which make toward recovery or death. First of all he should ascertain, as nearly as possible, the extent of the hepatization, for, when this is very considerable, not only is the patient in danger on account of the amount of lung-tissue rendered useless for respiratory purposes, but for the still graver reason that, other things being equal, the danger from collateral hyperæmia increases in a rapidly augmenting ratio with the increase of the hepatized area. If the hepatization is extensive, the prognosis is better when it is unilateral, even though the entire lung is involved, which must, however, be extremely rare, than when it invades both sides. It is, furthermore, important to ascertain the amount of the coincident bronchitis, as this may also exert a material influence upon the fate of the patient. We should remember that bronchitis of any extent is not a necessary accompaniment of pneumonia, and it should be eliminated from the case, if possible, or at any rate kept at a minimum.

Then the heart should be investigated in order to ascertain its strength and competence to accomplish the increased labor which it will have to perform during the next few days or weeks. Nothing is of greater importance to the welfare of a pneumonic than to have a strong, efficient heart. Even an hypertrophied heart, if not associated with mitral disease, or with only some slight lesion, as an inextensive aortic stenosis, may prove advantageous.

I remember once being taken by a fellow-practitioner to see a laboring man—a 'longshoreman, I believe—who had a croupous pneumonia involving almost the entire right lung, yet throughout the disease he sat in a chair, and even walked a little about the room. He made a good recovery. There was no marked collateral congestion or œdema on the other side. The doctor and I attributed the extraordinary result to the fact that the man had a simple cardiac hypertrophy, due, apparently, to heavy muscular work, which carried the apex out to the mammillary line.

The digestive apparatus should be closely observed in order that it may, if possible, be kept in condition to supply the body with sufficient nourishment to carry it through the disease. If hepatization has already occurred, it is, of course, impossible to reopen the vesicular structure; we must wait for this to occur in the natural course of the disease. It may be possible, however, in the early stages, to considerably limit the amount of hepatization, and, after it has occurred, to prevent its extension. This may be done by prompt and careful attention to the digestive apparatus, by counter-irritation, and such other measures as diminish pulmonary congestion. From my observation of its action, I am inclined to think that the salicylate of sodium has, besides its action upon the liver and mucous glands, and its antipyretic effect, some direct action upon the inflamed lung.

It has been shown by physiological experiment that, while the carbonic acid present in the blood, under normal conditions, does not decompose the salicylates, as it does in ordinary alkaline solutions, in the blood of asphyxiated subjects, where the carbonic acid is present in great quantity, it does do so. It has also been shown by Professor Ewald, as quoted by Nothnagel and Rossbach,* that the carbonic acid in inflamed tissues is under a tension three to four times as great as in normal tissues, so that, according to these authors, it is highly probable that the sodium salicylate circulating through such tissues would be decomposed and the salicylic acid set free. It could then act as a check upon the development of organic germs, or through some such special influence as it exerts upon inflamed rheumatic joints and serous membranes. As a matter of fact, it has occurred that the cases of pneumonia in which I have used the sodium salicylate from the start have done remarkably well, and it has seemed to me that the hepatization was less than might have been anticipated from the amount of congestion present in the first stage.

It is usually best to combine with the salicylate a small dose of the bicarbonate of sodium, as the salicylate is slightly acid in its reaction, and the mild alkali makes it more acceptable to the stomach. When the tongue is dry, red, or heavily coated, small doses of calomel may be given with it, say one twelfth of a grain or more, every two hours. The dose of the salicylate should vary with the condition and constitution of the patient. For an adult, ten or fifteen grains every hour is not too much, if the stomach will bear it. It is sometimes better to give smaller doses at more frequent periods. The time-honored methods of treatment need not be considered, as they are as well known to my audience as to myself.

The accompanying bronchitis is, in most cases, controllable. It should be treated by turpentine stupes, mustard, and by the administration of such internal remedies as are suited to the state of the bronchial mucous membrane, taking care not to derange the stomach.

The condition of the heart is most apt to cause anxiety after the first few days of illness.

Should the radial pulse become small and frequent, and the right heart distended, so that epigastric pulsation is well marked, recourse must be had to stimulants and the cardiac tonics. In such cases there are always collateral congestion and bronchial flux. If the condition is more serious, the fine moist râles indicative of œdema are audible, first in the lower portions of the lungs, then becoming more extensive in their distribution.

Dry cupping and other external revulsives may now be resorted to. The time for salicylates and like remedies has gone by, and we must begin the administration of carbonate of ammonia, digitalis, and nux vomica. But the most reliable agent of all is turpentine. This should be given either in capsule or emulsion, in doses of from five to ten minims, pretty frequently repeated. I have obtained most satisfactory results from the combination of turpentine, digitalis, and nux vomica, made into an emulsion with the mucilage of acacia, and flavored with the oil of wintergreen. This should be given every two hours, and alternated with whisky in doses suited to the case. The doses of digitalis should be large—two to five minims of the fluid extract, or a drachm of the tincture, for an adult.

A word in regard to the carbonate of ammonium. It has come to be a matter of routine with many to give this drug to everybody who has pneumonia. Since it was maintained by Bennett that it would prevent spontaneous coagulation of blood in the heart, it has come to be prescribed, as I think, altogether too freely. There is no evidence that, in the doses in which it is ordinarily administered, it will have any influence upon the coagulability of the blood. It is a good diffusible stimulant, and is a good remedy for bronchitis when the secretion is too profuse.

These are its uses, and the proper time for its employment is when the heart begins to flag, signs of extending congestion and imminent œdema present themselves, and the bronchial secretion is excessive. It is not useful before that, and should be withheld till the symptoms call for its administration. We should bear in mind that it is irritating to the stomach. The best form in which to administer it is the aromatic spirit of ammonia.

When a malarial complication is suspected, antiperiodic doses of quinine should be administered. Some very remarkable results have been obtained by this means. But a short time since, in my service at St. Mary's Hospital, Dr. Butler succeeded in cutting short a pneumonic attack in a child by the timely administration of a large dose of quinine. Pneumonia occurring in malarious regions is always most successfully controlled if the cinchona salts are freely used. In confirmation of this we have the testimony of all who have written upon the diseases of such regions, from Drake to Davis.

Hyperpyrexia due to other causes than malaria should be controlled either by the external application of cold, preferably the cold pack, or by the internal use of antipyrine. To children, with whom the drug acts remarkably well, it is best to give it in small and frequently repeated doses, as I have advised in capillary bronchitis. This would seem to be an excellent way of administering it in other febrile diseases. My friend, Dr. George R. Fowler, tells me that he has adopted a similar method in typhoid fever with very gratifying results.

The object should be, not to reduce the temperature to the normal standard, but to keep it steadily within bounds, and this is best done by moderate quantities of the drug, administered at short intervals. It is not necessary, nor do I think it advisable, to adopt the antipyretic treatment if the temperature is under 104° F., and if the patient is otherwise doing well. It is not well for a patient suffering from pneumonia to have too much treatment.

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* "Handbuch der Arzneimittellehre," 5te Aufl., Berlin, 1884, p. 475.

Original Communications.

ARABIC AND HEBREW IN ANATOMY.[*]

By F. B. STEPHENSON, M. D.,
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A recent French writer[†] refers to cases of intestinal occlusion in which operation might have saved life. He states, also, that Praxagoras proposed to open the intestine, and, "after having emptied it, to tie it up."

Although modern surgery does wonders, the records show that gastrotomy is not a new operation.[‡]

Excellences of sculpture are not the only treasures that become hid from sight and use in the passage of time.[#]

While owing much to the progress of the day, doctors may yet learn many things from their ancient *confrères.* Shall we not honor, by study[‖] of their works, those who show us the wisdom of physicians of former ages?[△]

This paper may serve to draw more especial attention to the labors of modern scholars through which old-time books of medicine are put within our reach; and in particular to those of Dr. Joseph Hyrtl, emeritus professor of anatomy in the University at Vienna.

Among a number of medico-scientific productions by Professor Hyrtl, the most recent that we have been able to get is the erudite work entitled "Das Arabische und Hebräische in der Anatomie."

This volume is dedicated to his friend, Dr. Friedrich Müller, the learned student and teacher of languages. It contains three hundred and fifty-eight pages, forty-seven of which are filled by the Introduction. On page 42, *et seq.*, is a list of Arabic names of diseases, with their modern equivalents. By an appendix of fifty pages, additions are made to the various sections of the book. In numerous foot-notes authorities are given, with other historic and linguistic data, explanations, etc. On the last eleven pages we find a list of Arabic and Hebrew terms used in the text, with translations in German.

Let us examine the Introduction in detail. The first sentence—"there was a time when much was written about anatomy, although anatomy was not"—makes one think of the words, words, words, in which facts of medicine are often drowned.[*] "This time lasted for more than a thousand years. From Galen's death (A. D. 201) till Mundinus de Suziis[†] (died A. D. 1326) the rich field of anatomy lay idle."

The author gives short sketches of works on anatomy extant in the first centuries of the present era, remarking that they were brief indeed, but long enough for that time, since they contained all then known on the subject. Men who were not doctors also wrote on this topic, as one Nemesius, a bishop in Edessa, Syria. He "was a philosopher and busied himself with anatomy, in the firm persuasion that all philosophy must arise out of the thorough knowledge of man himself."

"The noble language of Homer, that, in the decline of Grecian culture, lost none of its majestic beauty, gives to these writings a classic elegance."

The Latin authors appeared in the eleventh and twelfth centuries, being reproductions of current Arabian manuscripts; but both the matter of their translations and their style were incredibly bad.[‡] With Vesalius a new order of things began.

The Grecian medical texts were not destroyed in the burning of the Alexandrian library, nor the books on natural science, but only those philosophic and religious scrolls that were contrary to the laws of the Prophet.[#]

Inasmuch as the Arabs thus became possessors of all the science preserved by the Greeks in parchments, and probably more not so kept, we may expect to find in their writings a completer anatomy than has been, by other means, handed down to us from ancient Hellas.

What the Arabians translated from Aristotle and Galen was deformed, increased, or lessened, as they might fancy; and, from likeness of mind, the scholastic reasoners of the middle ages found more congenial study in the works of Avicenna and others of his intellectual type than in those of Greece.

The aphorisms of Hippocrates, the *Ars Parva* of Galen, with the *Materia Medica* of Dioscorides, were the only works used as text-books by the medical faculties of the Greeks; while at Vienna, according to the laws for 1389, in order to become *baccalaureus*, the student was required to hear the first and fourth *Canon Avicennæ*, the ninth book of *Rhases ad Almansorem* and the *Ars Commentata* of Joannitius.

The reason of so little gain in the knowledge of anatomy during the early centuries of our era was that the influence of theological (or religious) beliefs then dominant prevented dissection of the dead body. In this, Hebrews, Arabians, and Christians were alike.[*]

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[*] Read before the U. S. Naval Medical Society.

[†] Noël Gueneau de Mussy, "Clinique médicale."

[‡] "Quand, par l'observation directe du règne animal, étudié dans son organisation intérieure la plus délicate, Cuvier eut fini son travail, il trouva qu'il était arrivé à peu près aux mêmes divisions qu'Aristote avait établies, il y a plus de deux mille ans."—"La médecine et les médecins," par Louis Peisse. Paris, 1857.

[#] "It is said that the priests initiated to the secret science of the ancient temples knew how to call lightning from heaven (*évoquer Jupiter Elicius*) thousands of years before the time of Franklin."—Louis Peisse.

[‖] A more glorious monument than lifeless stone.

[△] "La médecine est la plus vaste et la plus complexe des sciences, la plus noble et la plus difficile de tous les arts. À ce double titre, elle exige du savant et de l'artiste le développement des plus hautes facultés de l'intelligence, et un degré superieur de culture générale, qui est l'œuvre des *belles-lettres.* Les connaissances techniques, seules, ne constituent que le praticien; c'est ce surplus d'ornement de l'esprit qui fait le médecin accompli. L'idée de la supériorité de la personne augmente le prix de ses services, et l'art sera d'autant mieux récompensé que les médecins seront placés plus haut, comme hommes, dans l'opinion. . . . La grande œuvre de la réunion de la famille humaine, que la religion et la poésie commencèrent, s'achevera par la science . . . la médecine."—L. Peisse.

[*] "Une vaine science, qui ne sait trouver que des mots."—L. Peisse.

[†] The following is part of an inscription on the monument at a grave thought to be that of Mundinus: S MAGRO ꝝ. These letters are an abbreviation of *sepulcrum magistrorum.*

[‡] Even in the records of anatomy we may trace the migration of races, shown, in this instance, by the predominance of Arabic terminology, which is evidence, also, of the relative decadence of the Greek and Latin languages.

[#] "Veterum Græcorum scripta, quæ de medicina tractare excidio erepta fuerunt," *et seq.*—"Historia medicinæ." Freind, Lugd., 1734, page 195.

In Baghdad, founded in the eighth century, was the first medical institution that required severe tests for those intending to practice the healing art. It had an academy of sciences organized like the *Museia* that formerly existed in Alexandria, Byzantium, and Pergamus. Many learned men were there maintained in order to collect the wisdom of the world, and translate and put it within reach of the multitude; but the law of the Koran did not permit them to make original research.

Herein lies the cause of the downfall of the followers of Islam—no free mental action; for the people that receives only, but gives out nothing, does not create or produce, surely sinks from the high levels of thought-life.[†] Thus the medicine of the Arabs has become quackery; their astronomy, astrology; their chemistry, the black art: their historians have become chroniclers; their philosophers, mystics; and their physicists, magi.

There is a good description of the work done by the brethren of the cloisters in translating from Arabic into barbarous Latin the texts they could get. Our author gives the names of a few of them, with some remarks, by way of biography, showing the amenities of life of those who determined to have an education and succeeded. We cite one, a Benedictine, Constantinus Africanus, who spent thirty-nine years in the schools of Arabia, in Persia, and in Hindustan. He died in 1087. Another was the Dominican monk Albertus Magnus,[‡] a celebrated master, for unusual wisdom surnamed the Great, although only a small part of his writings were especially anatomical. His death was in 1282.[#]

At the revival of learning in the fifteenth century some of the teachers passed by the Arabic terms in uncouth Latin dress, and went to the Greek for roots to names needed in describing various objects of anatomy. Foremost among these was Alexander Benedictus, otherwise famous on account of the open-air amphitheatre of dissection that he established at Padua in 1493.

A few lines throw a flood of light on the double origin of German medical terms, which are in part (the more ancient) from Arabic through the Latin, in part (more recent) from the Greek, made to supply the wants of modern progress—hence the great difference in form and primitive meaning of words now referring to the same thing.

Professor Hyrtl states that other parts of medicine have had their historians, but that the biography of anatomy is yet to be written.

To the *main part* of the volume we now give our attention. It is divided into one hundred and four sections, each, as a rule, devoted to the consideration of one or more words or expressions used as names of some anatomical structure.

Section 1 treats of the Arabo-Latin name *abgas*, used in mediæval times as we now use *amnion*. Professor Friedrich Müller is referred to as authority that the correct Arabic term is *amniyos*. Other defective and corrupt forms, found in various authors and in different translations, are *abeas*, *abghas*, *abigas*, *alicas*, *anfas*, and *ascham*. The term *amniyos* being thus found, we may not need look to the Greek for the origin of the word now employed. *Aurelia*, doubtless changed from *areola*, is another name for *amnion*, or *amnios* (given by the author). And which of these last two is the only right one? Although, in fact, we are free to choose, yet the origin of the word should have due weight. The circumstance that, in the Odyssey, the vessel in which the blood of the offerings was received bore the name ἄμνιον has nothing to do with the question, the root of both expressions being ἀμνός, agnus; and *amnios* (for the additional reason of the Arabic term *amniyos*) must be looked upon as correct. We find a number of other names, more or less fanciful. *Galea* and *diadema* were applied to the caul on account, it seems, of its shape, and because of the good luck supposed to attend those born therewith.

In section 58 *pancreas* is derived from the Arabic *encharas*. Its relation to πάγκρεας (used in another sense by Aristotle) is discussed. This is quite a different origin from that given in our medical dictionaries. Other names for this organ were *lactes*, *mesentorium*, and *encharus*.

From section 87 we learn that, in the writings of Vesalius,[*] the Arabic names of the *patella* were *alrasafe*, *aresfatu*, *rasga*, and *adaicon*. Inasmuch as *rasfah* and *rasafah* appear in the works of Avicenna, *rasga* is probably a result of the usual substitution in Spanish, when adopting a foreign word, of "g" for "f." *Scutum genu* and *os scutiforme* are given in Bartholinus as translations of the Hebrew *maghen*. *Concha* and *conchula* are from the Greek κόγχη; *mola* from μύλη. Some of the Latin expressions for the same part are *oculus genu*, *polus*, *rotula*, and *patella*. *Oculus genu* is a translation from Hebrew and Arabic. In Italian we see it as *ginocchio*. Ovid gives the name *orbis genu*.

From *patera*[†] (a deep dish or vessel) we have the diminutive *patella* (a shallow dish or plate used at Grecian sacrifices). Cicero refers to the *knee-pan* in the words *dii patellarii.* In French we have *palette* * *du genou.* The German is *Kniescheibe.* These are taken at random as specimens of the work.

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[*] A decree of the Council of Tours (A. D. 1163) "forbade priests and deacons to perform surgical operations in which cauteries and incisions were employed."—"A Book about Doctors," by J. Cordy Jeaffreson, p. 164.

[†] Un organe dans un individu ne perd jamais "les caractères normaux de l'espèce à la quelle il appartient sans que cette déformation imprime à cet organe les caractères normaux d'une espèce inférieure."—L. Peisse. Does not the same hold good as regards mental life—giving "mental" its widest meaning, and applying it not only to persons but also to nations?

[‡] "Place Maubert," in Paris, keeps his memory before the student: "M" is "Magnus" abbreviated, while "Aubert" is the French for "Albertus."

[#] Among modern books having some reference to this subject, we may name "l'Histoire de la médecine arabe," par L. Leclerc, Paris, 1876.

[*] "In der chirurgischen und anatomischen Schriften von Vesal."

[†] This is, probably, from κρατήρ, the first letter being dropped, with other slight change. Such instances are not infrequent. The changing of "r" into "l" in words brought from Greek to Latin is shown in ἀστήρ, from which we derive *stella*, the first letter being dropped, as in the previous case; in Sanskrit we find *tara*; Zend, *starann*; English, *star*; German, *Stern*. We see the change of "r" to "l" when Chinese try to speak English. Examples of similar transformation are found on comparing Italian, Spanish, and Portuguese. Swedes and Norwegians have a hard task in pronouncing the English sound of "j."

Many anatomical names underwent great and grievous change in the passage from Greek to Arabic, and thence to monkish Latin. In some instances the modes of transformation might interest the student of languages. For example, instead of *epilepsia* is found *billensia;* in *cradia* we find cardia; *acormion* stands for acromion. *Ir,* meaning a part of the hand, seems to be from *χειρ.*

Some of our anatomists may be surprised to learn that *saphena* and *basilica* are not of Grecian, but Arabic, origin, that *auriculæ cordis* and *vermes cerebri* are Latin translations of Arabic expressions; and that in the middle ages *nucha* meant what is now called *thorax.* Our author traces the word *atresia,* not to the Greek, but to the Arabic *alratia* (al-ratqa). The anatomy of to-day has very few terms of Hebrew origin: *pomum Adami* and *cauda equina* are examples. Words may have in anatomy meanings very different from those given them in the classics—*e. g., fibræ* in Latin literature answers to *intestines, entrails.* Some expressions used by the early investigators in the description of anatomical parts are fanciful in the extreme. We prefer to leave them in the original German.

Encharas (pancreas) and *alratia* (atresia) may be cited as examples of the ignorance (or should we say carelessness?), perhaps necessary, of those who tried to translate the Arabic texts into the languages of Europe—examples, also, of the error of giving a plausible origin in place of one more correct or none. In this way many names were, doubtless, derived from words that only seemed like; and the mistake, sanctioned by authority, grown customary in usage, becomes all the harder to rectify as time passes.

It is well known that some expressions used in medicine have in themselves no apparent meaning. A part of them may be but arbitrary terms; others are, doubtless, due to errors of ignorance in translators and to other causes mentioned by our author. Is it too late to remove these imperfections?†

Much valued help was received by Dr. Hyrtl from Professor Friedrich Müller in regard to the Arabic words in this volume, which becomes thereby of special interest to students of that tongue. Due credit is given to Dr. Friedlowski for the index of Arabic and Hebrew terms at the end of the book.

The comparison of various languages—Hebrew, American, Arabic, Greek, Latin, Italian, French, Spanish, German, English, etc.—makes the work at once a pleasure and instruction for the student of linguistics.

Professor Hyrtl has taken unusual care to avoid any misprint, and warns the reader that an apparent error may be only the "*Latino-Barbari*" in his quotations.

The German fullness and accuracy in detail (shown particularly in the references) are proof of the great labor devoted to hunting out and arranging material so essential to an exact knowledge of anatomical names, and, therefore, to correct ideas in description of parts and location of lesions.*

Excellent lessons in the science of criticism are found in the different sections of the book.

Remembering how much diversity of view yet exists in the literature of anatomy, we may imagine the learning and persistent care required to make an exact systematic and valuable work of the mass of material found in the manuscripts of the early authors. The result of his efforts this eminent teacher gives to the world.

SOME REMARKS ON ARABIC AND HEBREW IN ANATOMY.†

By ANDREW M. MOORE, M. D.,

SURGEON, U. S. NAVY.

The paper of Dr. Stephenson contains internal evidence of laborious research, and the authenticity of the facts given can not in the main be gainsaid. But, while conceding all this, I should like to call attention to one statement, not for the purpose of contradicting it, but to find out, by discussion, just how much historical testimony there may be in its support, or *vice versa.* I refer to the assertion that in the destruction of the Alexandrian library by the Mohammedans the medical and other scientific writings were preserved. Gibbon states that when the victorious General Amru, at the intercession of a Greek philosopher, appealed to the caliph for permission to spare this great treasure from the general wreck, he received this familiar response: "If the books are confirmatory of the Koran, they are useless and need not be preserved; if contradictory, they are pernicious and ought to be destroyed." Thus Amru, continues the historian, gave orders to have these precious manuscripts distributed among the public baths, and he adds, with some expression of doubt, that six months are said to have been consumed in their incineration. Draper, in his "Intellectual Development of Europe," gives substantially the same account of this transaction. No one can doubt the accuracy of the sage and historian who prepared himself for his great work by twenty years of study and seclusion. Is it credible that such a writer as Gibbon would have omitted to mention so important and far-reaching a fact? Any one who has read carefully his philosophical treatise on history, and thus made himself familiar with the mental bias of the author, can not doubt, I think, that he would not have passed by such an opportunity for signalizing the liberality, toleration, and love of learning of the Moslems, and of contrasting it with the narrow and persecuting spirit of the early

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* The derivation of this word from Latin *palla* or *pala* seems very doubtful. Those familiar with linguistic changes easily see how *patella* in Latin might become *palette* in French, especially when we take into consideration the centuries of popular ignorance during the time that a great part of this language was formed. See the preceding foot-note.

† *Vide* "Théorie des analogues," de Geoffroy Saint-Hilaire; also the views of M. Piorry on *nomenclature et classification pathologiques.*

* For those, *in nostro docto corpore,* inclined to think such investigations of no value, or of little worth, we quote Epictetus: "*αρχή τῆς παιδεύσεως ἡ των ὀνόματων επίκεψις*—Nominum consideratio instructionis principium est."

† Read before the U. S. Naval Medical Society.

Christians. While, therefore, the writer has reason, from the authority which he quotes, for making this statement, it appears to me that the proof is insufficient for giving to the Mohammedans the credit of so liberal and gentle an act, which, if true, deserves to be reverenced by all students immeasurably beyond that which the verdict of mankind has hitherto accorded to it. It is well known that the old Alexandrian library, which was established by Ptolemy Soter, about 300 B. C., was destroyed, either accidentally or otherwise, in the capture of the city by Julius Cæsar, and that, in order somewhat to appease the grief of Cleopatra, Marc Antony made her a present of the rival library of Pergamus, containing some two hundred thousand volumes. These were added to the rolls preserved in the temple of Serapis, and, by subsequent addition, this library grew into grand proportions. In the fourth century a great deal of this valuable collection of manuscripts was destroyed by the intolerant Bishop Theophilus, who had obtained permission from Theodosius the Great. So, it would seem, there could not have been very much for the Saracens to spare or condemn in the seventh century.

At a period a little later than that of the foundation of the Alexandrian library by Ptolemy Soter, his son, Ptolemy Philadelphus, founded the Alexandrian Museum. Having arranged its studies in the four faculties of literature, mathematics, astronomy, and medicine, he appointed the physicians Herophilus, Cleombrotus, and Erasistratus instructors in the latter. Both Ptolemy and Herophilus were born in Cos, where Hippocrates, a century before, had redeemed Greek medicine from the miracle cure of the temples of Æsculapius, and placed it upon the sure foundation of reason and observation. It is reasonable to infer that both these distinguished men imbibed some of the investigating spirit of the "father of medicine." For Ptolemy Philadelphus insisted that Herophilus and his collaborators should base their studies and instruction upon a knowledge of anatomy derived from dissection of the human body, and even required vivisection of the lower animals and condemned criminals in the pursuit of physiological truths, for, said he, is it not right that those who have already forfeited their lives by crimes against the State should be made to contribute to the welfare of humanity? Thus it was here, in the Alexandrian Museum, in the third century, B. C., that we have the earliest authentic record of dissection of the human body. Theophilus was aware of the existence of the lacteals, and of their anatomical relation to the mesenteric glands. Erasistratus, his colleague, described the structure of the heart, its connections with the arteries and veins, and taught that there were two kinds of nerves—those of sensation and those of motion.

It is pertinent here to acknowledge the indebtedness of medicine to the Nestorian Christians, who, having been banished from Constantinople in the fourth century, carried their enthusiastic love of literature into Asia, established the medical schools of Edessa and Djondesabour, and translated many Greek works into Arabic and Hebrew. The Nestorians and Jews, being alike persecuted by the orthodox Christians, were treated with more toleration by the Mohammedans, who, perhaps, were influenced by the similarity of monotheistic belief. Thus it came about that the Nestorians and Hebrews, who were the conservators of ancient medical learning, the profession in Christian Europe having been given up to relic and shrine cure, imparted their knowledge to the Arabians, after the latter's occupation of Africa and Spain, during the seventh century. The Moors and Jews established flourishing medical schools at Toledo, Cordova, Granada, and Seville, and were teaching a rational system of medicine from the seventh to the fifteenth century, at a time when benighted Christian Europe was, through the invocation of saints, trying to cure disease by the propitiation of an offended Deity.

DIOPTRIC, DIOPTRE, DIOPTRIE, OR DIOPTRY?

By EDWARD G. LORING, M.D.

Jack Cade once put to death a peer of the realm, partly, perhaps, because he was a peer, but principally, as Cade himself alleges, because "he was a man who was for ever talking of a noun and a verb."

Verbal discussions, it is true, are often as unprofitable as they are uninteresting. Still, it does seem to me to be a matter of importance, if not of interest, that the proper mode of spelling the word which forms the heading of these remarks should be definitely settled. All the more that the word is the embodiment of exactness, and represents a unit of measurement and a mathematical equivalent.

In commenting upon my use of the word, Dr. Swan Burnett remarks, in the last number of the "Archives of Ophthalmology": "We notice with regret that he sanctions the use of the word 'dioptric.' 'Dioptric' is an adjective with a well-established meaning in our dictionaries, and it is confusing, not to say incorrect, to use it in the sense of a substantive which has a meaning, quite sharply defined, of its own. The unit of refraction of the metre-lens is a 'dioptry.'" This ought, perhaps, to settle the matter, since "he himself has said it"; but still the fact remains that the word is spelled differently by authors of repute, and that these various forms have been used for the last ten years, and are still in use.

Thus Forbes, Hartridge, Frost, Juler, and others, use dioptre; Swanzy uses dioptry; Noyes uses both dioptrie and dioptry; Green prefers dioptrie; and a writer in a late number of "The Ophthalmic Review" (London) uses, as I do, the old form, dioptric, which is also used almost exclusively by the trade.

As for its being incorrect to use the word "dioptric" in the sense of a substantive, I believe one of the very first to so use it was Dr. Burnett himself. He says: "The unit of the new system, the No. 1 of the new series of glasses, is a lens with a focal length of *one metre*. It is called a DIOPTRIC." * (The small capitals are in the original.) The word, so spelled, occurs some twenty-eight or thirty times. In a subsequent translation from Landolt, Dr. Burnett wrote the word "dioptry."

So far as the etymology goes, there is no objection to the spelling "dioptric." We have the plural noun dioptrics, and there is no reason why we should not have the singular noun, since we have the same use in a similar word. Thus we have the plural noun "optics" and the singular noun "optic" ("an instrument of sight, an organ of sight"), and the adjective "optic." There could be no possible confusion between the plural noun "dioptrics," meaning that part of optics which treats of the refraction of light, and "dioptrics," the sum of the units of refraction, as the latter is always preceded by a numeral, and the former never is.

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* "Ophthalmic Hospital Reports," vol. viii, part iii, p. 635.

I find that most of the authors which I have by me use "dioptre," with the plural "dioptres." This has the recommendation that it is in sympathy, at least as far as sound goes, with our use of the word metre, and, as we get both of the words directly from the French and only indirectly through the Greek, it might appear well to conform to that usage. Thus we have metre, metres, and metric, and it would seem natural to have dioptre, dioptres, and dioptric, strict etymology to the contrary. I am inclined to think that "dioptre" is the word which will be ultimately adopted into English. Personally, I should prefer "dioptric" for the reasons stated above, but I am perfectly willing to conform to any spelling that shall be definitely settled upon by those who are competent to decide it.

There is another point brought forward by Dr. Burnett which I think is a very important one to those who are entering for the first time upon a study of physiological optics. It is contained in the following passage* in regard to the interchange between the old and new system of numeration: "It is further unaccountable to us why he should accept 1 D as equal to 36″ focus. Most of the lenses used in this country are ground to the English inch, of which there are 39·37 to the metre, and it would be much nearer the truth and in keeping with a more generally accepted practice to consider 1 D = 40 inches focus. But even if the French inch is used, 36 is not perfectly accurate, for, with the index of the refraction of the glass generally used in manufacturing lenses (1·53 instead of 1·5), a lens having a radius of 36 inches will have a focal distance of only 34 inches, and, in order to have a focus of 1 metre, its radius must be 37 inches."

In the first place, I did not accept 1 D as equal to 36″ focus. It is expressly stated in the text that, "as the French metre is equal to *thirty-seven* inches, 1 D = $\frac{1}{37}$." I did, however, add that for practical purposes, except for the few higher numbers, $\frac{1}{36}$ was sufficiently exact, as it is easier to divide. It is, moreover, stated in the text that the French inch has been adopted as the standard, and that "the focal length of a bi-convex glass is equal to the radius of its curvature." That is to say, $f = r$. When this is so, then the index of refraction of the glass must be 1·5, and 1 D must equal $\frac{1}{37}$ French inches. This is precisely what was taken by Landolt, in the paper already cited, as translated by Dr. Burnett himself. He says: "In order to pass from the old system to the new, we have only to remember that 1 metre = 37 inches (Paris). The dioptric (D) corresponds therefore to a lens of 37 inches focal distance, and D, or $\frac{1}{1\text{ m}}$ of the new system, is equal to $\frac{1}{37}$ of the old."†

This is the only possible result under the conditions taken, and it ought not to have appeared from his own writing "unaccountable" to Dr. Burnett. As it was shown subsequently that the index of refraction of the glass of which spectacles are usually made was not so had been assumed in the classical formula (1·5), but higher, Landolt added in a later publication a table which corresponded to the index of 1·53, and thus made D = $\frac{1}{39{\cdot}15}$, or nearly 40 inches radius (French). Thus we see that r no longer equals f, but is considerably larger. If we take the English inch, then the radius must be, when we take one metre as 39·5 English inches, as Landolt does, 41·87, or very nearly 42 inches.

I think, moreover, it is a mistake to say "that most of the lenses used in this country are ground to the English inch." I am informed both by Mr. Hunter and by Mr. Meyrowitz that the glasses in their test cases as well as those in their spectacles are of French manufacture, and consequently are ground, not to the English inch, but to French measurements, and I am inclined to think, if the truth were known, it is the same with all the principal dealers. Moreover, from the fact that the numbers on the French glasses of the old system happen to correspond to the focus expressed in *English* inches, it has been pretty widely supposed, especially by opticians, that these glasses are ground to the English scale. This is, however, an error which depends again on the index of refraction which makes a glass ground, for example, on a radius of 36 French inches correspond to a focus of 36 *English* inches. It was this which led Mr. Meyrowitz to state that "all trial-case lenses are numbered in English inches, and that, consequently, 40 is nearer to 1 D than 36."

Nor is it correct to suppose that, with an index of refraction of 1·53, the radius of a lens, "in order to have a focus of one metre, must be 37 French inches." On the contrary, such a lens must have a radius of 39·22 French inches. This follows directly from the formula $f = \frac{r}{2\,(n-1)}$.

$r = 1{\cdot}06 \times 37 = 39{\cdot}22$ French inches, and, as a matter of fact, 1 D is not ground on a radius of 1 metre, but on a radius of 1·06 metre. Even Dr. Burnett, in his own translation of Landolt's work, says: "Thus, for an index of refraction of 1·53, a lens of 37″ = 1 metre focal distance should have a radius of curvature of 39·15";* not, as he now says, "of 37 French inches." Landolt gets 39·15″ instead of 39·22, probably because he takes the metre, not, as stated in the text, as equal in round numbers to 37″, but to 36·94, which is more exact.

If we take, as Nagel does, an index of 1·54, then the radius would have to be 39·96 French, and 42·66 English inches. If, however, we take what is known as "double extra flint-glass," used for optical purposes, and which has an index of refraction of 1·71, the radius would have to be 52·54 French, and 56·09 English inches (taking the metre as equal to 39·5″). Thus, starting with an index of refraction of 1·5, we may have a set of glasses with the identical focus of one metre with a radius which varies from 37 to 52·54 French, and from 39·5 to 56·09 English inches.

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* "Archives of Ophthalmology," vol. xv, No. 1, p. 144.

† "Ophth. Hospital Reports," vol. viii, part iii, p. 637.

* "Examination of the Eyes," p. 87

This immense variation is due solely to the index of refraction, and I have dwelt upon it because I wish to emphasize as strongly as I can the necessity for those who do not understand even the rudiments of optics to become thoroughly familiar with the law which in its simplest form makes the focus of a biconvex glass equal to its radius, and because I desire to foster in every way in my power the growing inclination on the part of the general practitioner to use the ophthalmoscope, not to discourage him with technicalities. When the beginner has once mastered the few great principles upon which refraction depends, so far as the instrument is concerned, he can then turn to minutiæ which, though simple enough in themselves, are, it would seem from the above, at times confusing even to the trained ophthalmologist.

THE INFLUENCE, FROM A CLINICAL STANDPOINT, OF

CICATRICIAL TISSUE IN THE ANGLES OF THE LACERATED CERVIX.*

By WILLIAM E. MOSELEY, M. D.,
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I have found it impossible to formulate a title that will convey to you concisely, and at the same time with anything like exactness, the character of the short paper I wish to present to your notice. Just what I *desire* to accomplish is this: To demonstrate, by exclusion, the influence that hard, or the so-called cicatricial tissue, deep in the angles of the lacerated cervix, has in causing the many nervous phenomena, such as headaches, general neuralgias, and general nervous irritability, which have been commonly included under the head of reflex nervous symptoms, and in causing, or at least perpetuating, the anæmia which almost invariably marks those cases of neglected laceration in which we are called to operate. Besides this, I would enter an earnest plea for the most scrupulous adherence to the rules laid down and repeatedly emphasized by our common teacher, Dr. T. Addis Emmet, as to the removal of *all* hard tissue from the angles before closing them.

Of all the great mass of material one finds in print upon this subject of lacerated cervix, but very little takes into account the fact that such hardened tissue as that spoken of exists in the angles. Some writers deny its existence, and of those who do recognize it but few accord it any position as a factor in the causation of the long list of symptoms which mark that condition of extreme invalidism that follows and has repeatedly been proved to depend upon the original injury. For example, Dr. W. Gill Wylie ("Am. Jour. of Obstet.," Jan., 1882, p. 92) states that there is no such thing as a "cicatricial plug" or mass of hard, fibrous tissue in the angles of any lacerated cervix. Dr. T. G. Thomas, whose work is probably more extensively used than any other as a text-book, does not mention the subject. Dr. Goodell gives it a considerable notice, but with so many wet blankets subsequently applied as to have much the same effect as "damning a man with faint praise." Dr. Goodell says ("Lessons in Gynæcology," 1880, p. 218): "I shall now proceed to denude the edges of the fissure and to dissect away all the cicatricial tissue in a wedge-shaped piece." But he continues: "In freshening so deeply situated an angle, the circular branch of the uterine artery is in danger of being wounded, and I shall merely skim the surface with this delicate knife curved on the flat." In a more recently written article ("Am. Jour. of Obstet.," vol. xv, p. 124) he says: "Another occasional indication for the operation is the presence of dense cicatricial tissue in the angles of the fissure. . . ." But adds: "From my observations I am disposed, indeed, to believe that the baneful influence on the system of hard and gristly cicatricial tissue left after some cervical tears has been overrated."

Dr. Mundé ("Minor Surgical Gynæcology," 1885, p. 433) says: "The cicatrix also presses on the terminal nerve-filaments in the cervix, chiefly in the upper angle of the rent, and, through communication with the sympathetic system, produces reflex neuroses in the pelvis, down the thighs, along the back, and in different distant portions of the body." And on page 438 of the same work he says: "The dense cicatricial substance, by compressing the terminal nerve-filaments, gives rise to multitudinous and diverse reflex neuroses in other parts of the body."

But no one speaks so positively in regard to both the presence of a mass of cicatricial tissue in the angles of the original tear and its influence in perpetuating the anæmia and causing the varied reflex nervous phenomena as Dr. T. Addis Emmet. On page 468 of his last edition he says: "We frequently meet with cases where nature has attempted to repair the injury and to prevent the gaping of the flaps, in a double laceration, by filling in the angles on each side by granulations as the parts have healed. The result is that a dense cicatricial plug remains. When this condition exists, there is often much reflex disturbance of the nervous system, and frequently it is the exciting cause of neuralgia in other parts of the body." Again, on page 486: "We can not ignore the clinical fact . . . that, after nature has repaired the injury by partially or completely filling the gap between the flaps by cicatricial tissue formed in the process of healing by granulation, marked reflex disturbances will sometimes be established."

That any experienced gynæcologist should doubt that a mass of hard, fibrous, in this case cicatricial, tissue (the "cicatricial plug" of Emmet) is to be found deep in the angles of many cases of neglected lacerated cervices, seems to me strange, as frequently it is perfectly easy of demonstration. In a number of cases I have removed tissue as characteristic as that reported upon by Dr. Garrigues (Emmet's "Principles and Practice of Gynæcology," 1880, p. 491), hard and gristly to the feel, which, when dissected out, left a bed of smooth, apparently normal, uterine tissue. This plug always, so far as my experience goes, extends much more deeply on the inner surface of the uterus, often quite to the internal os, the original laceration extending obliquely outward and involving the whole thickness of the cervical wall only in its lower or outer portion. This makes its complete removal, without marked danger of serious hæmorrhage, much easier than would be possible did it extend farther out toward the attachments of the broad ligaments. I think a principal cause of misunderstanding in regard to this "cicatricial plug" is, that we do not distinguish between those cases of deep laceration in which the healing process has taken place as described by Dr. Emmet, and subsequent contraction of the cicatricial tissue has drawn the cervix into a comparatively natural shape, leaving the tissues of the anterior and posterior lips in a practically normal condition, and those in which the changes subsequent to the laceration have so altered the tissues of the whole cervix as to render it a hard, fibrous mass.

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* Read at the second meeting of the Alumni Association of the Woman's Hospital.

We see that opinions on this subject differ very widely, ranging from a denial of the existence of anything like a cicatricial mass to a very positive affirmation, not only of its existence, but of its direct causative influence in bringing about the numerous neuroses mentioned, and it occurred to me that, in this very mixed state of affairs, you might feel an interest in the recital of a few cases which seemed, to my mind, to demonstrate that this same "cicatricial plug" or mass of hard, fibrous tissue was, not only the offending member, but the only factor playing the part of a *direct* cause which could be found, and that its removal was followed by a change in the nervous symptoms, too sudden to be accounted for by the slow changes which would result from simply an improved state of nutrition.

CASE I.—In June, 1879, I was called upon to assist a medical friend in a tedious and difficult case of labor, and, by means of forceps, delivered Mrs. C. of a large, dead male child. From that time I lost sight of the lady until the early autumn of 1880, when I was asked to take charge of her as a gynæcological patient. At this time she complained of general weakness, and irregularity of menstruation, the flow being accompanied by pains in both ovarian regions and back. She was somewhat anæmic and generally run down.

Examination showed a double laceration of the cervix which was somewhat granular; a slight laceration of the perinæum, an anteflexion of the fundus, and some tenderness in the region of both broad ligaments. She was put upon hot douches with applications of Churchill's tincture of iodine and glycerin pads preparatory to repairing the cervix and perinæum, but before that could be done she was taken down with a double pneumonia, during her convalescence from which I left home and entered the Woman's Hospital. During my absence from home my patient continued the hot douches, and had applications made by a medical gentleman, who finally pronounced her well and insisted that there was no occasion for an operation. On April 23, 1882, a few days after my return from New York, this patient came to my office, and on that day I recorded the following history:

Mrs. C., aged thirty, married eleven years. Has had two abortions (at five months and six weeks, respectively), but followed by no unpleasant symptoms. One labor at term three years ago, hard, tedious, and completed by forceps. She dates her sickness from the labor three years ago. Since that time she has had attacks of menorrhagia with leucorrhœa most of the time. During menstruation she suffers some pain in micturition, and walking causes undue fatigue, with abdominal pains and backache. Appetite variable and bowels constipated.

At this time she complained of pains in both ovarian regions and back, with *almost constant severe headache.* Menstruation was rather irregular and painful. She was very weak and anæmic, and nervous even to the extent of hysteria, crying on the least provocation. Locally, there was no marked tenderness about the uterus, nor was there any decided enlargement of that organ.

There was a double laceration of the cervix with but slight ectropion, and the whole surface was covered with a smooth epithelium. The fundus uteri was somewhat anteflexed. The laceration of the perinæum had not resulted in any displacement of the uterus requiring support. Deep in each angle of the cervical laceration there was exquisite sensitiveness, even slight pressure causing marked suffering, and the same was true of pressure, made with a stiff probe, at corresponding points in the cervical canal.

On May 17th I removed a considerable amount of hard, cicatricial tissue from each angle, completing my excavating only when the last bit of hard tissue had been eradicated, leaving the remaining tissue soft and natural, and then closed the angles with silver-wire sutures. At the same time I closed the perinæum, the surfaces denuded being slight in extent.

From *the day of the operation* she expressed herself as feeling relief from the old pains and nervousness. Three weeks later she took a considerable walk with greater ease than for many months, and on July 15th, two months from the date of operation, examination showed that there was no tenderness in the cervix, the old nervous symptoms and pains had entirely disappeared, and the patient had gained much in strength.

Now, here we have a patient who for over a year had had the benefit of hot douches and approved applications to the cervix and vaginal vault, and with evident improvement of the local condition. The laceration of the perinæum was slight, and in the three years since its occurrence had not resulted in any displacement of the uterus. The anteflexion probably antedated her last confinement and still exists. There was not enough pelvic cellulitis or engorgement to cause any sensitiveness about the uterus, and the cervix itself, with but slight ectropion, was covered with a smooth epithelium. But, in spite of all this, the headache, pelvic pains, anæmia, and nervousness had steadily gone on increasing. Hard, cicatricial tissue was removed from the angles of the cervical tear, and from *the day of operation* improvement was noticeable. The neuralgic symptoms disappeared at once, and the nervousness and anæmia steadily improved. In two months there was no tenderness in the line of union, and the patient expressed herself as well, and has remained so up to the present day.

CASE II.—Mrs. S., aged thirty-eight, first consulted me January 29, 1884. She had been married seventeen years; had had three children, but no abortions, all the labors, especially the last, being rather rapid. She dates her illness from her last labor, nearly ten years ago, but has been much worse for the past four years, during which time she has had occasional menorrhagia, with dysmenorrhœa, free cervical leucorrhœa, and at times painful micturition. Her general health has been steadily failing, the anæmia becoming more and more marked, and she has lost much flesh. She is excessively nervous, so much so as to unfit her for her domestic duties or seeing friends. She is *naturally* a very active, energetic woman, and one who formerly had her nerves well under control. Seven months before, she consulted a physician, who made some applications and fitted a pessary.

Examination showed a double laceration of the cervix, with the lips somewhat granular, and a slight laceration of the perinæum. There was no marked tenderness about the uterus or in the ligaments, but there was great sensitiveness on pressure deep in the angles of the cervical laceration, where the tissue was very hard. I thought it best to remove the pessary which was in her vagina.

For nearly four months she was kept on general tonic treatment, with hot vaginal douches twice daily, and applications to the cervix and vaginal vault twice each week. During this time the granular condition of the cervix entirely disappeared, and there was considerable improvement in her general condition, but her marked gain in health dated from the time of her operation, April 17th, on which day I removed a large amount of cicatricial tissue from both angles in the cervix, and at the same time repaired the comparatively small tear in her perinæum. From that time the gain was steady and rapid. The nervous symptoms, headache, and dyspepsia disappeared; her color became good and she gained rapidly in flesh. I have seen her within a few weeks, and she informed me that she was really *well*.

In this case we have a woman who had no cellulitis, no subinvolution, no misplacement, no pelvic engorgement, but in whom there was present a mass of hard cicatricial tissue deep in the angles of an old laceration, these points being marked by great sensitiveness to pressure. Although she had improved somewhat under treatment, the change immediately following the operation was so marked that I could but believe that the cervix operation was the prime factor in her restoration to health.

Case III.—Mrs. M., aged twenty-nine, consulted me February 6, 1884, and was as thoroughly anæmic and run-down a woman as I have often seen, unable to walk two squares without great fatigue. She had been married four years and had had two children, the first labor being rapid and the last rather easy. She had been losing ground since her first labor, three years before. Locomotion caused bearing-down feelings. Her bowels were constipated and her appetite was poor. She complained of almost constant headache, nervousness, and great weakness. Examination showed a uterus two inches and a half deep, lying slightly low in the pelvic cavity; a double laceration of the cervix, deeper on the left side, with marked tenderness deep in the angles. There was but slight eversion of the lips, which were covered with a smooth epithelium. There was no tenderness in the broad ligaments or in the pelvic tissues about the uterus.

Four days later, February 10th, I removed considerable cicatricial tissue from both angles of the cervical laceration, closing them with silver-wire sutures; also closed the perinæum. From the time the ether headache passed off there has been no return of the old constant misery, except an occasional attack of headache which could be readily accounted for. Within the next few months she gained fully thirty pounds in flesh and became rosy and strong. That the restoration of the perinæum did little in accomplishing this result is demonstrated, I think, by the fact that after the operation she was obliged to wear a pessary to overcome the slight amount of prolapsus before mentioned.

Case IV.—Mrs. W., aged forty-one, first came under my care March 26, 1885. She has been married twenty-three years and has had four children, but no abortions. The last labor occurred eleven years ago. The first labor was hard and tedious; the others were normal. She has had slight leucorrhœa following the menstrual flow, frequent micturition with burning at times, and some bearing down. Locomotion causes pains in the pelvis, which pains seem to extend up the spine to her head. Her general health is very poor, she is excessively anæmic, her bowels are constipated, and her appetite is poor. For years she has had to depend upon specially prepared foods, on account of inability to digest ordinary food. She can walk but very little. She has suffered from almost constant severe pain beginning in the top of her head and extending down to the base of the skull and upper portion of the spine. She is very nervous, but not hysterical. She has been, in short, a complete invalid for the past fifteen years, but dates her sickness from her first confinement, twenty-one years ago. She has been attended by two physicians, being cauterized freely for so-called "ulceration" of the cervix. Examination showed the uterus in position, except for a slight anteflexion of the fundus, and of normal depth. There was no very marked tenderness or hardness in the cellular tissue about the uterus or in the broad ligaments. There was an old, deep, double laceration of the cervix, which contained a number of enlarged Nabothian follicles and was generally hard and unyielding to the touch. There was no tenderness on pressure in the cervix, except deep in the angles of the laceration, where slight pressure caused great suffering. The perinæum was slightly lacerated, but there was no rectocele.

The patient was placed upon hot douches twice daily. The follicles in the cervix were punctured, and applications of iodine and glycerin pads followed up for one month, when I removed a very large amount of dense tissue from both angles and closed them with silver-wire sutures. The excavating process was carried to such an extent that one of the gentlemen assisting me remarked that it was a revelation to him that such a cavity could be made without serious hæmorrhage. From the time of her getting up the improvement in Mrs. W.'s general condition was very marked. The headaches became less severe and less frequent. Her appetite and digestion improved steadily, and in a comparatively short time she was able to walk twelve city squares without great fatigue, and now doubles that distance. And all this improvement took place in spite of the greatest drawbacks, her husband becoming insane and dying in an asylum subsequent to the operation—circumstances calculated to test a nervous system to the utmost.

Here, again, we have a woman whose surroundings were of the best, who had the most tender care, but whose local treatment was calculated to increase the deleterious effects of the original laceration, and who for fifteen years had steadily lost ground. Examination failed to show any factor which could account for the marked anæmia and apparently reflex neuroses, except this same "cicatricial plug," upon the removal of which the improvement was prompt and rapid.

As there was still some tenderness in the angles in this case, a year after the first operation, I repeated it a few days ago, removing some bits of hard tissue that I had before left; but it is too early to give the result of my second operation.

My records would furnish me with many more cases in which there were present hard, fibrous masses in the angles of old lacerations and in which their removal was marked by relief of the same set of symptoms as in these cases cited, yet, although I am personally thoroughly convinced of the part the cicatricial tissue played as an active irritant, there were, accompanying this one factor, too many other pathological conditions to allow one to demonstrate just what rôle the hard tissue filled. Still we have four cases in which the principal symptoms were decided irritation of the nervous system, the so-called reflex neuroses, and anæmia. Thorough examination failed to reveal any abnormal local condition other than the mass of cicatricial tissue which, to my mind, would serve to explain the symptoms. In every case the operation was done with great thoroughness, the removal of all the hard tissue in the angles being the first object (and this was accomplished in all except the case of Mrs. W., her whole cervix being hard and fibrous). In every case the relief to symptoms was prompt and marked, dating from the day of operation.

My attention was first specially called to this subject while in the Woman's Hospital by a case in which Dr. Emmet operated for the third time for the relief of persistent nervous symptoms, and up to the time of my leaving the hospital the last operation appeared to be a success. During the past four years I have studied this class of cases as closely as possible, and only to be each year more thoroughly convinced of the important rôle which this hardened tissue plays when found in the angles of a lacerated cervix.

I am not prepared to advance any new theory as to its mode of action, or, as the result of any personal investigations, to corroborate any old theories, but I have tried, simply by a system of exclusion, to demonstrate that, in some cases at least, certain conditions result from the presence of this tissue, and that relief follows its *thorough* eradication.

If Dr. Emmet is correct in his estimate of the baneful influence of this cicatricial tissue, and at this writing I am fully convinced he is, we can not do better for our patients, for ourselves, and for gynæcology, than to follow his instructions to the letter and remove *all* the cicatricial tissue from the angles before closing a lacerated cervix.

A CASE OF

PAINFUL GLAUCOMA ABSOLUTUM

OF TRAUMATIC ORIGIN.

By C. R. Agnew, M. D., and David Webster, M. D.

Mr. C., aged fifty-two, a native of New York, but engaged for the last thirty years in navigating the Amazon, states that, when a boy, he ran a nail into his right eye. The eye recovered from the injury without much permanent impairment of vision. It gave him no special trouble until about a year and a half ago, when he observed a gradually increasing dimness of vision. About a month ago, while stooping in a rail-car, he again injured the eye by striking it against the corner of one of the seats. Since that the eye has been very painful and without perception of light.

He has now (May 25, 1886) a somewhat highly injected eyeball with considerably increased tension, and synechia anterior with closure of pupil. An extensive area of the cornea—nearly all of the lower half—is opaque, and far back, as seen when the eye is turned downward, there is a well-marked bulging of the sclera which may be due to an intra-ocular tumor, or, on the other hand, may be simply a scleral staphyloma. R. V. = 0. L. V. = $\frac{20}{20}$.

Mr. C. said he had been rather a hard drinker until two years ago, since which he had drank only sparingly of alcoholic beverages. He still used tobacco to excess. It was thought advisable to have the condition of his kidneys looked into. A twenty-four hours' specimen was therefore examined by Dr. George L. Peabody, who made the following report:

"Many hyaline casts, a few granular casts, much pus, specific gravity 1·016°, moderately acid, a large quantity of albumin; quantity of urine passed in twenty-four hours, ℥ xvj."

On May 27th the eye was enucleated by Dr. Agnew, assisted by Dr. H. L. Collyer and Dr. Webster. The patient took ether as kindly and recovered as promptly as those who are without disease of the kidney. There was much more bleeding than usual following the enucleation, which may have been due to an atheromatous condition of the arteries so common in chronic interstitial nephritis.

The enucleated eye was examined by Dr. T. Mitchell Prudden, Director of the Physiological and Pathological Laboratory of the Alumni Association of the College of Physicians and Surgeons, and Pathologist to the Manhattan Eye and Ear Hospital, who made the following report:

"*June 27, 1886.*—Cornea shows irregular anterior epithelium, peripheral vascular areas, and an increase in the number of corneal cells. The cornea is closely bound posteriorly to the iris by an organized mass of new tissue.

"The iris is shortened and partially adherent to the anterior lens capsule and richly infiltrated with small spheroidal cells.

"The ciliary body is moderately flattened, and on one side is richly infiltrated with red blood-cells and pus. Pus-cells lie among the ciliary processes. The anterior segment of the lens is much degenerated, showing a series of ragged communicating cavities partially filled with rounded hyaline bodies and granular matter.

"The anterior portion of the retina is distorted and infiltrated with pus-cells. Posteriorly the retina is nearly normal. But there is a depression at the optic-nerve entrance which extends back to the level of the external boundary of the sclera.

"The optic nerve, near the globe, is moderately infiltrated with small spheroidal cells.

"The choroid is considerably hyperæmic in places, harbors larger and smaller collections of pus-cells, while in still other parts it is considerably thinned as if by compression. In the hardened globe I did not detect any projecting portion of the sclera."

The synechiæ anterior and posterior were probably due to the injury with the nail in childhood. The opacity of the cornea may have been partly due to the same cause and partly to fresh infiltration caused by the injury in the rail-car. The eye was in the first stage of a panophthalmitis when enucleated, and it is probable that the patient was saved from a protracted period of suffering with, possibly, a sympathetic affection of the fellow-eye by prompt enucleation.

When seen some three weeks later, Mr. C. was wearing an artificial eye with satisfaction, and, having entirely abandoned stimulants and moderated his use of tobacco, was contemplating a return to his duties on the Amazon.

Book Notices.

Le langage intérieur et les diverses formes de l'aphasie. Par Gilbert Ballet, Professeur agrégé à la Faculté de Médecine de Paris, etc. Paris: Félix Alcan, 1886. Pp. xvi–174.

This little book is a philosophical essay on language, mimetic, oral, and written, and the parts played by the cerebral centers and the apparatuses of special sense in its exercise, together with an analysis of the various disorders commonly embraced under the term aphasia. It shows a wide range of reading on the part of the author, not only in medicine, but also in general literature, and gives evidence of careful and critical thought in its preparation. It is valuable both for the text, which is exceedingly well written, and for the numerous foot-note references, which form a comprehensive index of the most important contributions to our knowledge of the disorders of speech.

Consultation-Chart of the Eye Symptoms and Eye Complications of General Diseases. Prepared by Henry G. Cornwell, M. D., Columbus, Ohio. Second Edition, revised and enlarged. Cincinnati: Robert Clarke & Co., 1883.

This chart is intended as an office reference-chart for consultation, and in its preparation the author has adopted in the main the general arrangement followed by Förster in his monograph upon "The Relations between Diseases of the General System and of Individual Organs and Diseases of the Eye," Leipsic, 1877. It will no doubt prove useful in facilitating a diagnosis in diseases of doubtful character.

Directions for the Antiseptic Treatment of Wounds as employed at Professor Billroth's Clinic. Arranged for Students and Physicians. By Dr. Victor R. v. Hacker, Assistant Surgeon at Professor Billroth's Clinic in Vienna. Translated by Frederic W. Taylor, A. B., M. D. Boston: Cupples, Upham, & Co., 1884. Pp. 41.

This pamphlet contains a very clear and carefully arranged description of the iodoform method of treating wounds in Professor Billroth's clinic, which has almost entirely taken the place of what is popularly considered Listerism, or the use of carbolic acid and the spray. And, as the treatment is much less troublesome and complicated, and is followed by equally good results, it appeals very powerfully to the general practitioner who is anxious to do something to relieve his conscience as regards bacteria, and yet does not care and has not the means to practice complete antiseptic surgery. The method of using the dressing in different varieties of wounds and of preparing the different solutions of iodoform, and the varieties of lint, gauze, etc., are all plainly described in as few words as possible; and, as the treatment is much simpler than Listerism, a careful reading of the pamphlet will enable anybody to practice it.

The Diseases of Children. A Hand-book for Practitioners and Students. By Armand Semple, B. A., M. B. Cantab., M. R. C. P., London. Physician to the Northeastern Hospital for Children; Physician to the Royal Society of Musicians; author of "The Voice musically and medically considered"; "Aids to Medicine." New York: G. P. Putnam's Sons, 1884. Pp. 352.

With the dimensions which pædiatrics, as a science, has reached, it would obviously be impossible to cover it in anything like a comprehensive manner in a book of the size of this one. The author has called it "A Hand-book for Practitioners and Students," and it may perhaps answer to this definition, but it is barely an introduction to more extensive works, which must be referred to in order to obtain a satisfactory knowledge of the subjects of which it treats.

The Influence of Sex in Disease. By W. Roger Williams, F. R. C. S., etc. London: J. & A. Churchill, 1885. Pp. 39.

This little work not only represents a surprising amount of industry, but shows how useful statistics may become when they are properly arranged. It is impossible to give more than a passing allusion to the numerous carefully prepared tables before us. The most interesting are those showing the relative frequency of neoplasms in the two sexes (pp. 10–18), the general deduction, based upon an analysis of 11,000 cases, being that "the liability of females to new growths is more than twice that of males." Injuries and surgical diseases receive careful consideration. When we reflect that these tables are founded largely upon the records of one hospital, and that by no means a large one (the Middlesex), we can not sufficiently admire that trait in our English *confrères* which leads them on all occasions to make the most of their opportunities.

Cutaneous Memoranda. By Henry G. Piffard, M. D., etc. Third Edition. New York: William Wood & Co., 1885. Pp. vi, 1–268. [Wood's Pocket Manuals.]

Under the name of "Cutaneous and Venereal Memoranda" this book has already won for itself the right to a place in every practitioner's working library. As the publishers have lately given us a manual of venereal diseases, our old friend now appears without its venereal part. Dr. Piffard has rewritten the book in great part, and added much valuable matter in regard to treatment. The book is also rearranged, nine wood-cuts have been inserted to illustrate some of the diseases of the skin, and sections upon epithelioma, erysipelas, and milium have been added.

BOOKS AND PAMPHLETS RECEIVED.

Analysis of the Urine, with Special Reference to the Diseases of the Genito-urinary Organs. By K. B. Hofmann, Professor in the University of Gratz, and R. Ultzmann, Docent in the University of Vienna. Translated by T. Barton Brune, A. M., M. D., etc., and H. Holbrook Curtis, Ph. B., M. D., etc. Second Edition, revised and enlarged. New York: D. Appleton & Co., 1886. Pp. 310. [Price, $2.]

A Manual of Practical Therapeutics, considered with Reference to Articles of Materia Medica. By Edward John Waring, C. I. E., M. D., Fellow of the Royal College of Physicians, London, etc. Edited by Dudley W. Buxton, M. D., B. S., Lond., etc. Fourth Edition. Philadelphia: P. Blakiston, Son, & Co., 1886. Pp. xxix–9 to 666. [Price, $3.]

Bright's Disease and Allied Affections of the Kidneys. By Charles W. Purdy, M. D. (Queen's University), Professor of Genito-Urinary and Renal Diseases in the Chicago Polyclinic, etc. With New and Original Illustrations. Philadelphia: Lea Brothers & Co., 1886. Pp. xi–17 to 295. [Price, $2.]

The Modern Treatment of Stone in the Bladder by Litholapaxy. A Description of the Operation and Instruments, with Cases illustrative of the Difficulties and Complications met with. By P. J. Freyer, M. D., M. Ch., Bengal Medical Service. London: J. & A. Churchill, 1886. Pp. 116.

The Laws and Mechanics of Circulation, with the Principle involved in Animal Movement. By W. H. Triplett, M. D. New York: J. H. Vail & Co., 1885. Pp. xxiii–1 to 510.

On the Disorders of Digestion, their Consequences and Treatment. By T. Lauder Brunton, M. D., D. Sc., F. R. C. S., etc. London and New York: Macmillan & Co., 1886. Pp. xvi–1 to 389. [Price, $2.50.]

Manual of Operative Surgery. By W. Arbuthnot Lane, M. D., M. S., F. R. C. S., etc. London: George Bell & Sons, 1886. Pp. ix–1 to 276. [Price, $2.25.]

The Hygiene of the Vocal Organs. A Practical Hand-book for Singers and Speakers. By Morell Mackenzie, M. D., London, Consulting Physician to the Hospital for Diseases of the Throat, etc. London and New York: Macmillan & Co., 1886. Pp. xii–1 to 223. [Price, $1.50.]

A Guide to the Examination of the Nose, with Remarks on the Diagnosis of Diseases of the Nasal Cavities. By E. Cresswell Barber, M. B. Lond., etc. With Illustrations. New York: J. H. Vail & Co., 1886. Pp. xi–163.

An Introduction to General Pathology, founded on Three Lectures delivered at the Royal College of Surgeons, London, 1886. By John Bland Sutton, F. R. C. S., Sir Erasmus Wilson Lecturer on Pathology, Royal College of Surgeons, etc. Philadelphia: P. Blakiston, Son, & Co., 1886. Pp. xvi–390. [Price, $4.50.]

Report of a Case of Successful Transfusion in Typhoid Fever. By W. S. Whitwell, A. M., M. D. [Reprinted from the "Pacific Medical and Surgical Journal and Western Lancet."]

On Some Points of Interest connected with the Wanklyn Method of Sanitary Water Analysis, particularly on the Detection of Recent Sewage and the Determination of the Nature of the Organic Matter. By Charles Smart, Major and Surgeon, U. S. Army. [Reprinted from "Public Health in Minnesota."]

The Ohio State Sanitary Association. Third Annual Meeting, held in Columbus, February 24 and 25, 1886. [Reprinted from the "Sanitarian."]

The Paralysis of Pott's Disease and its Behavior under Protective Treatment. By Henry Ling Taylor, M. D., New York, and Robert W. Lovett, M. D., Boston. [Reprinted from the "Medical Record."]

The Private Treatment of the Insane as Single Patients. By Edward East, M. R. C. S., L. S. A., etc. London: J. & A. Churchill, 1886. Pp. 68.

Transactions of the Obstetrical Society of London. Vol. XXVIII. For the Year 1886. Part I, for January and February. Pp. 63.

Transactions of the Medical Society of the State of West Virginia. Nineteenth Annual Session, held at Charleston, May 19 and 20, 1886.

The Function of the Recurrent Laryngeal Nerve. From Experimental Studies in the Biological Laboratory of the Johns Hopkins University. By Frank Donaldson, Jr., B. A., M. D., etc. [Reprinted from the "American Journal of the Medical Sciences."]

The Sanitary Value of the Chemical Analysis of Potable Waters. By Willis G. Tucker, Ph. D., Albany, N. Y. [Extracted from the "Transactions of the Albany Institute."]

Treatment of Neoplasms of the Naso-pharyngeal Cavity. By J. G. Carpenter, M. D., of Stanford, Ky. [Reprinted from the "Journal of the American Medical Association."]

Sequels of Naso-pharyngeal and Aural Catarrh. By J. G. Carpenter, of Stanford, Ky. [Reprinted from "Gaillard's Medical Journal."]

Four Cases of Oophorectomy, with Remarks. By Joseph Taber Johnson, M. D. [Reprinted from Vol. X, "Gynæcological Transactions."]

Seventy-second Annual Report of the Trustees of the Massachusetts General Hospital and McLean Asylum. 1885.

Correspondence.

LETTER FROM LONDON.

The Medical Act.—Home-Rule for the Medical Profession.—Advances in Cerebral Surgery.—Consultants and General Practitioners.—Sketch of Dr. Samuel Wilks.

London, *July 10, 1886.*

We doctors have got home-rule at last, a trivial measure of it, no doubt, but still the principle has been conceded, and in time we may hope that it will be less grudgingly applied. When I last wrote no one expected that the Medical Bill, which had then just passed through the House of Lords, would ever become law, but in the last days of the session it was hurried through the House of Commons, and received the royal assent before the dissolution. It is almost the only piece of solid work for which the short-lived and ill-starred Parliament of 1885 can claim credit. The necessities of the case demanded, by general confession, a much more radical reform; but the universities and corporations are very powerful in Parliament, and have always been able to defeat any measure which touched their privileges or their prerogatives. The new act leaves them practically unmolested, and it is thus to its harmlessness, or, from our point of view, to its inadequacy, that it owes its success. The act directs that no practitioner shall henceforward be allowed to practice his profession unless he has passed a trustworthy examination in medicine, surgery, and midwifery. This is a distinct improvement on the old system, under which a student could qualify in surgery alone, or in medicine alone, and at once proceed to practice all the different branches of the medical art. Still, the corporations are left with full power to undersell each other in the diploma traffic, the only guarantee that they will keep up their examinations to an adequate standard being provided by occasional visits from inspectors sent down by the General Medical Council. The council is, as you know, our supreme authority under the Privy Council in matters medical. Hitherto it has consisted of a president, six members elected by the crown, and seventeen members elected by the universities and corporations. Henceforward it will consist of thirty members, of whom twenty will be chosen by the universities and corporations, five will be appointed by the crown, and five elected by the registered medical practitioners of the United Kingdom—viz., three by the practitioners of England, and one each by those of Scotland and Ireland. The blot on this new constitution is that the licensing bodies will have a majority of two to one over the independent members; and, though it may be readily confessed that many of the representatives of the corporations are men of the highest ability and probity, still they are sent to the council to represent and support the interests of their several corporations, and, in matters wherein the interests of the profession or of scientific progress are at variance with the interests of the corporations, we could hardly expect their judgment to be unbiased. In short, until the Medical Council contains a sufficient number of independent representatives to outvote the combined representatives of the corporations, the question of medical reform in this country can not be considered as in any way satisfactorily settled. The new act must be regarded rather as a cautious installment of reform and an earnest of future change than as a definitive settlement of the question.

An interesting case in which the newest knowledge of brain-function was successfully applied to the relief of an individual case is exciting much attention here. A man was recently admitted into the National Hospital for Epilepsy and Paralysis, suffering from so-called "Jacksonian" epilepsy of over two years' standing. The fits began in the thumb, and Dr. Hughlings Jackson, arguing from some recent investigations on the cortical area for the upper limb, recommended the application of the trephine over the lower part of the area which is now believed to contain the special thumb center. The operation was successfully carried out under antiseptic precautions by Mr. Victor Horsley, and a tumor was discovered in the suspected spot and removed, together with the remainder of the thumb-center. The wound healed without a drawback; the patient has had no fits since, and is recovering power in the paralyzed limb.

In another case, in which severe epilepsy was evidently caused by an old injury to the brain, the same surgeon recently excised a mass of cicatricial brain tissue around the upper end of the fissure of Rolando; the patient has so far made an excellent recovery and has had no recurrence of convulsions. These cases will form the subject of discussion at the forthcoming meeting of the British Medical Association at Brighton.

A movement has recently been set on foot by some London general practitioners with the object of defining more accurately the relations which in their opinion ought to exist between consulting and general practitioners. Many of the latter complain that, when they send patients for advice to consulting physicians or surgeons, the latter not unfrequently "annex" the said patients, either in their current or in subsequent illnesses. They also complain that consulting physicians and surgeons by seeing private patients enter into undue rivalry with general practitioners. The former they aver have higher rank and consideration than the latter, and are especially favored in being alone eligible to hospital appointments. It is therefore unfair, they contend, that they should step in and take the bread out of the mouths of the less favored general practitioner. An association is being formed, the members of which more or less solemnly bind themselves to call into consultation only such consulting practitioners as are known to confine themselves to pure consulting practice. The association professes itself anxious to assimilate the procedure in medical consultations to the procedure of the legal profession, in which no client is allowed in a civil case to have direct access to the barristers whose advice is sought. The association contends that the advice of the consultant, like that of the barrister, ought to be given, not to the patient, but to his ordinary medical attendant.

On this movement I may remark that, though one can not help deploring the abuses it is intended to remove, it is obviously a movement in a backward direction. All recent change has been in the direction of freedom from paper restraints. The once strict and courtly etiquette of the English school of physicians has dissolved never to recrystallize; and there can be little doubt that the profession of law, which has ever shown itself more conservative than that of medicine, will ere long follow in its footsteps and shake off the fetters that bind it. Many, if not most, of our younger barristers are in favor of the privilege, which I believe is enjoyed by your "bar," of direct access to their clients: and, if the old restrictions are beginning to be looked on as effete by the lawyers, it is hopeless to try and introduce them among doctors. The fact is that patients will not be bound by our etiquette if they see that it works to our advantage rather than theirs; at the same time it must be confessed that the abuses which are complained of, and the existence of which is admitted, would never have arisen if the consulting practitioners had adhered to the spirit of the old-fashioned etiquette, which was excellent, however absurd its letter may have been. It is easy enough for the consultant to transfer a patient's confidence from his ordinary attendant to himself, if he allows himself to speak slightingly of the former's opinion and treatment. If the good old rule, never to assert or imply anything derogatory to another practitioner's opinion (which, after all, may turn out to be the correct one) had been uniformly adhered to by our consultants, we should never have heard anything of the present movement, for which I am afraid I must prophesy an early grave.

That there are in London many consulting practitioners who act up to the highest and best spirit of medical ethics is a fact which must be gratefully acknowledged. I could mention dozens of them, but I will in preference conclude this letter with a sketch of a physician who, perhaps more than any other, has won estimation and popularity as a pure consulting physician—viz., Dr. Samuel Wilks.

The pupil and successor at Guy's Hospital of Bright and Addison, Dr. Wilks has done more than any one to hand down the tradition of honest and earnest labor left us by those two memorable physicians. His work, like theirs, has lain largely in the post-mortem room, and his most important contributions to medicine have been founded on study of the dead body. At the same time, he has been and is a careful student of the living, and his clinical pictures of disease are faithful and complete, as every one who knows his volume on nervous diseases will readily confess. His portraiture of migraine, for instance, deserves to rank with the best productions of the old masters, such as Sydenham and Bright. The tradition of the Guy's Hospital School, of which Sir William Gull and Dr. Wilks are the chief living exponents, and the posthumous volumes of the late Dr. Hilton Fagge its latest literary incarnation, is notable for its judicious management of those two yoke-fellows, pathological and clinical research, and it is especially salutary at the present day, when one of the two threatens to take the bit between its teeth and rush away on his own account. It has been by their thoughtful blending of the results gained in ward and dead-house that Bright, Addison, Gull, Wilks, and Hilton Fagge have made their reputation, and with it, in large measure, the reputation of the modern English school of physic.

With the qualities which he shared in common with his predecessors and contemporaries at Guy's Hospital, Dr. Wilks combines an uncompromising honesty of mind and purpose and a modesty of expression which give his character an especial charm. He never mounts the pedestal; his teaching is never dogmatic. He is always ready to say "I don't know," or to confess ignorance where accurate knowledge is unattainable. He is a student still, as every physician ought to be, and in consultation with the youngest of his colleagues will argue out the question from the common level of studentship, and not from the elevation to which most men gladly mount as the prerogative of age and experience. To this absence of dogmatism and self-assertion Dr. Wilks probably owes it that he has not a large personal following of private patients, but, on the other hand, it has won him the unwavering confidence of the thoughtful general practitioner, and has thus given him his exceptional position as a pure consulting physician. He is mainly esteemed as an authority in nervous diseases, many of which he has done much to elucidate—*e. g.*, the clinical and pathological features of visceral syphilis. But he is far from being a specialist, his prolonged work in the wards and post-mortem room of Guy's Hospital having given him a complete and accurate acquaintance with the whole range of disease, medical as well as surgical. A general physician *par excellence*, he is in himself a standing argument against the views of those who contend that the reign of the general physician is over and the kingdom of the specialist established. In the matter of treatment, Dr. Wilks steers an even course between therapeutical skepticism and the fussy therapeutics of many of the new schools. In his sketch of Dr. Addison he has explicitly condemned "the dallying with remedies which has been the characteristic of more recent times"; but his treatment shows that he is equally far from falling into the fault of still more recent times and wantonly interfering with the natural course of disease. Being thus minded, Dr. Wilks perhaps lacks that imposing quality which goes to the making of most so-called leaders of men, but, as it is his only ambition to be reckoned for what he is worth, it is not necessary to condole with him on this failing.

The European Faculties.—The "Lancet" states that Dr. B. Falk has been appointed extraordinary professor of state medicine in Berlin, and that Dr. Breisky, of Prague, has been appointed to succeed Professor Späth at Vienna.

THE
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A Weekly Review of Medicine.
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Edited by
Frank P. Foster, M. D

NEW YORK, SATURDAY, JULY 24, 1886.

PRECISION IN MEDICAL LANGUAGE.

We are aware that there are many members of our profession who do not hesitate to profess disregard, not to say contempt, for accuracy and precision in language, and that they are sincere in the matter we can not doubt, or they would not make use of the wretched expressions that frequently appear under their names. We are at a loss to discern on what principle their position can reasonably be defended, for it seems to us of the first importance that medical writing should be so clear and precise as to admit of no doubt as to its meaning. Moreover, slovenly expression can only be the outcome of confused thought, and clear-headed readers are not slow to draw this inference. Doubtless the late Dr. Austin Flint's remarkable skill in the use of language was not generally recognized as a prime factor in his popularity as an author, but it must have exerted an influence, even if unknown to those who felt it. In the case of Sir Thomas Watson the same skill undoubtedly was recognized, and we are decidedly of the impression that it would have given Mr. John Simon far greater weight as an author than is now commonly attributed to him, but for the fact that so much of his writing is buried in government blue books. It is not the graces of fine writing that we have in mind, but only a clear and orderly use of the common forms of speech.

One of the fundamental steps in any reform of the loose methods of expression now so often seen in medical literature is the restoration of words of legitimate and traceable origin in place of certain incorrect forms that have crept into use. Probably no man now living has done more to further this object than Professor Hyrtl, of Vienna, and we are glad that his recent work, "Das Arabische und Hebräische in der Anatomie," has met with such appreciative commentary in this country as will be found in Dr. Stephenson's article, published in this issue of the journal. It is much to the credit of the Naval Medical Society, of whose proceedings we have before spoken in commendation, that two such scholarly papers as Dr. Stephenson's and Dr. Moore's should have been read before it, for it shows that, so far at least as the medical corps of the navy is concerned, medicine has not yet degenerated into mere handicraft.

Dr. Loring's paper, also published in this number of the journal, is a notable contribution to the reform of medical language. To be sure, he is on the defensive, and scarcely goes further than to justify his own use of the word *dioptric*, while frankly stating his impression that it will ultimately have to give way to *dioptre*. We think that Dr. Loring has made a good defense, and, furthermore, that the strictest conscientiousness did not require of him that he should admit the objection to *dioptric* implied in what he speaks of as "the plural noun 'dioptrics,' meaning that part of optics which treats of the refraction of light," being likely to give rise to confusion. He shows, it is true, that no such confusion need arise, since the real plural *dioptrics*, meaning "the sum of the units of refraction," is always preceded by a numeral. We say "real plural," for the "'dioptrics,' meaning that part of optics which treats of the refraction of light," which Dr. Loring chivalrously treats as a plural is in reality a singular noun; a better distinction between that word and the plural of *dioptric* would be that one requires a verb in the singular and the other a verb in the plural. It must be remarked, however, that Dr. Loring's position is made all the stronger by his having admitted even a false point against it.

HOSPITAL SUNDAY IN ENGLAND.

We lately spoke in praise of the course pursued by the "Lancet" in adding materially to the cost of its production by inserting long supplements devoted to the furtherance of the Hospital Sunday collection. It is gratifying to see that that journal was able to announce in its issue for July 10th that up to the evening of the 8th the total sum received was quite £5,000 more than on the corresponding day last year. We have no doubt that this increase was in great measure directly due to the "Lancet's" efforts. It appears almost incredible to medical men that it should be necessary for the press to urge upon the public each year the needs of institutions to which they themselves devote so much of their time and energies without a thought of any pecuniary compensation. Our contemporary aptly remarks that, while "hospitality," in the ordinary acceptation of the term, has not declined among the wealthy classes, as shown by their expenditures for luxuries, real hospitality is waning. "Hospitals," it says, "are being starved, out of all proportion to the badness of the times, while millions are being squandered on luxury." This is a grave accusation, but it is supported by figures. We trust that the condition of affairs is not quite so bad with us, but we have no little cause for complaint.

In the "Lancet's" supplement for June 26th there is an introductory article on "Medicine, the Church, and the People," which contains a forcible appeal to the clergy to support the Hospital Sunday movement. Following this is Mr. Brudinell Carter's Mansion House oration, an able argument in favor of medical charities. Referring to the trite charge that dispensary patients are used for purposes of "experiment," Mr. Carter says: "Much turns, of course, on what we mean by 'experiment,' for, in one sense, it is an experiment to do anything which in any degree departs from precedent. . . . Experiment is merely the application of previously acquired knowledge one step further, and hospitals allow such further applications to be made under the most favorable conditions. . . . What I may call the sacredness of the patient is a feeling which underlies the whole course of medical training and practice in this country." Sir Andrew Clark's Lambeth address, given in abstract, concludes with an appeal to the public in which it is justly urged that a country's credit is in danger when it can not support its charities.

Other enthusiastic meetings were held in various places in London, largely under the influence of the "Lancet's" suggestions. The reader may infer that the profession of London have been in earnest in their endeavor to stir the laity in behalf of the hospitals. It occurs to us that, if we showed like energy here, our people would respond more generously than at present. It is a good thing for representative physicians to unbend occasionally, and to explain to the outside world certain matters about which impressions are as various as they are vague. Many persons who are ordinarily well informed harbor the crudest notions about hospitals, which they regard chiefly as affording seclusion for the unrestrained indulgence of doctor's sanguinary propensities. The sooner such mediæval ideas are rooted out, the better. We see, therefore, in the humane and energetic course pursued by the "Lancet" not only a powerful stimulus to public charity, but likewise a valuable means of public enlightenment.

MINOR PARAGRAPHS.

OLEOMARGARIN BEFORE CONGRESS.

We confess to some doubt whether Congress is not going beyond the bounds established by our traditional policy, although not perhaps beyond constitutional warrant, when it undertakes to set limitations upon the sale of oleomargarin. If any legislation to that end is to be done, however, it ought to be a trifle less flimsy than the measure to which the Senate has finally whittled down Mr. Miller's bill. In the first place, the tax on that product was cut down from five cents a pound to two cents, and into the clause prohibiting the sale of the article as butter the word "knowingly" was interjected, thus in all probability doing away almost entirely with any prospect that the bill, in case it becomes a law, can be used for suppressing the fraudulent sale of the commodity. Efforts were made to still further emasculate the bill, but Mr. Miller was able to defeat them.

ITEMS, ETC.

Infectious Diseases in New York.—We are indebted to the Sanitary Bureau of the Fourth Division of the Health Department for the following statement of cases and deaths reported during the two weeks ending July 20, 1886:

DISEASES.	Week ending July 13.		Week ending July 20.	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever	10	4	10	2
Scarlet fever	34	5	34	6
Cerebro-spinal meningitis	5	5	7	7
Measles	74	12	73	9
Diphtheria	69	34	57	25
Small-pox	2	0	1	0

Yellow Fever in Boston.—It is reported that on Friday of last week two cases of the disease were discovered at quarantine, on a vessel that had just arrived from the ports of Ponce, Porto Rico, and Miragoane, Hayti. The first case is said to have made its appearance when three days out, and the second when eight days out from the latter port.

The Late M. Robin.—"Union médicale" announces that the friends and pupils of the late M. Robin have resolved to open a subscription to a fund for erecting a monument to his memory.

The Yale Medical School.—It is announced that Dr. Henry L. Swaim has been appointed lecturer on diseases of the ear and throat.

Army Intelligence.—*Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from July 4, 1886, to July 17, 1886:*

Page, Charles, Lieutenant-Colonel and Surgeon. Leave of absence further extended one month. S. O. 156, A. G. O., July 8, 1886.

Waters, William E., Major and Surgeon. Ordered for duty as post surgeon, Fort Spokane, Washington Territory. S. O. 112, Department of the Columbia, July 2, 1886.

Gibson, Joseph R., Major and Surgeon. Granted leave of absence for three months, to take effect about August 1st. S. O. 158, A. G. O., July 10, 1886.

Barnett, Richards, Captain and Assistant Surgeon. Leave of absence extended six months on surgeon's certificate of disability. S. O. 162, A. G. O., July 15, 1886.

Gardner, Edwin F., Captain and Assistant Surgeon. Granted leave of absence for two months. S. O. 158, A. G. O., July 10, 1886.

Owen, William O., Jr., First Lieutenant and Assistant Surgeon. Ordered for duty at Fort Schuyler, New York Harbor. S. O. 84, Division of the Atlantic, July 15, 1886.

Naval Intelligence.—*Official List of Changes in the Medical Corps of the United States Navy for the week ending July 18, 1886.*

Wentworth, A. R., Assistant Surgeon. Detached from the Brooklyn and to wait orders.

Norton, Oliver D., Assistant Surgeon. Detached from the Minnesota and ordered to the Brooklyn.

Marine-Hospital Service.—*Official List of Changes of Stations and Duties of Medical Officers of the United States Marine-Hospital Service, for the three weeks ended July 17, 1886*:

White, J. H., Assistant Surgeon. Granted leave of absence for thirty days. July 12, 1886.

Pettus, W. J., Assistant Surgeon. When relieved at Charleston, S. C., to proceed to Savannah, Ga., for temporary duty. July 9, 1886.

Society Meetings for the Coming Week:

Monday, *July 26th:* Boston Society for Medical Improvement.

Tuesday, *July 27th:* Medical Society of the County of Putnam (annual), N. Y.

Wednesday, *July 28th:* Auburn, N. Y., City Medical Association; Medical Society of Gloucester County (quarterly), N. J.; Berkshire, Mass., District Medical Society (Pittsfield); Middlesex North, Mass., Medical Society (Lowell).

Thursday, *July 29th:* Cumberland, Me., County Medical Society (Portland).

Letters to the Editor.

IMPERFORATE RECTUM.

New York, *July 16, 1886.*

To the Editor of the New York Medical Journal:

Sir: I ask the attention of Dr. Coskery and the readers of your valuable journal to the following additional records of cases of imperforate rectum in which life was prolonged without operative interference. They are to be found in the record of a case similar to Dr. Coskery's, in which I operated successfully by left inguinal colotomy, on page 177 of vol. lxxxviii of the "American Journal of the Medical Sciences," as follows: *Case I*, reported by Cripps in the "Lancet" for May 15, 1880, of a child thirty days old with imperforate rectum, who was apparently well, food being taken and fæcal matter vomited three or four times a day. *Case II*, mentioned by Curling, on page 224 of his classical work, edition of 1876, in which the child was alive after twelve weeks of such existence. On page 488 of the same volume of the "American Journal of the Medical Sciences" will be found some interesting remarks by Dr. Packard on the same subject.

Very truly yours, W. H. Haynes.

Proceedings of Societies.

NEW YORK ACADEMY OF MEDICINE.

Meeting of June 3, 1886.

The President, Dr. A. Jacobi, in the Chair.

An Amendment to the Constitution.—Article VIII, section 1, of the constitution was amended to read: "The Academy may suspend or expel a fellow for violation of its regulations or the commission of any act which unfavorably affects the character of the medical profession or the interests of the Academy."

Dr. Samuel C. Busey, of Washington, was introduced by the president, and, by request, Dr. Barker, the ex-president, occupied a seat on the platform.

The Influence of Surgery upon the Obstetrical Art.—Dr. Charles Carroll Lee based his views regarding the "Future Influence of Surgery and Surgical Resources upon Obstetrics" (the title of his paper as announced on the cards of invitation) upon what had been done in the past. He briefly reviewed surgical operations in relation to obstetrics, dwelling more particularly upon the Cæsarean section and its modifications, the Porro or Porro-Müller operation, and the laparo elytrotomy of Thomas. To those who practiced obstetrics and gynæcology, and even to those who felt but a languid or a theoretical interest in these branches of medicine, nothing was more impressive than the rapid inroads of surgery into a domain heretofore deemed strictly medical. Was this just or natural? A most distinguished fellow of the Academy, whose counsel had been equally sought in this hall and in many anxious consultations in obstetrical practice, was known to deprecate this tendency of the day, and felt it a mistake that gynæcology should invite the frequent aid of the knife or obstetrics that of the surgeon's scalpel.

Obstetrics had been practiced as an art from the earliest ages. Although at first its methods were rude and uncouth, it had kept pace with advancing civilization. At an early date obstetrics and surgery were practiced in common, but by degrees obstetrics had gradually passed into the hands of women. In most serious cases, however, the surgeon was called in consultation. Subsequently the art of obstetrics again passed into the hands of men.

The indications for the performance of the Cæsarean section were excessive pelvic contraction and insuperable obstruction by cancerous degeneration of the cervix or encroachment upon the lower pelvis by solid tumors. If the mother was moribund or dead, and the child was known to be living, it might be advisable to effect rapid extraction of the child in this manner The risk of the operation might be inferred from the fact that in this country the general mortality had been sixty per cent., and in Great Britain eighty-one per cent. The principal causes of death were delay before performing the operation, and the shock and exhaustion caused thereby, peritonitis, septicæmia, and, rarely, hæmorrhage.

The four modifications had all originated in Germany. Frank, of Cologne, proposed, in 1881, a plan which was intended to secure perfect drainage, and to make the operation partially extra-peritoneal. The uterine incision was made low down anteriorly, and the round ligaments of the womb were drawn together and secured with carbolized-silk sutures, thus shutting off the incision from the peritoneal cavity; and from this blind pouch drainage was secured through the vagina. In one (fatal) case in which this operation was performed, the peritoneal cavity was found at the autopsy to be quite free from fluids.

Kehrer, in 1882, proposed to open the uterus transversely in its lower third anteriorly, partly to avoid the placenta, which, however, was rarely attached at this point, and partly to prevent the gaping of the uterine wound. This operation had been done twice, once successfully.

Sänger, in 1881, proposed a modification of the Cæsarean section which, so far as Dr. Lee had been able to learn, had been practiced eight times in Germany with the result of saving six women and eight children. It had been done three times in this country, death taking place in each instance, apparently because of delay in operating. Cohnstein, of Heidelberg, had suggested that the uterus be turned out of the abdomen and opened longitudinally behind instead of in front, drainage to be effected through a tube perforating Douglas's pouch. Dr. Lee thought it not likely the operation would ever be performed.

The substitutes for the Cæsarean section were the Porro, or Porro-Müller, operation and Veit's modification thereof, and laparo-elytrotomy as performed by Dr. Thomas. Porro performed his operation of amputating the womb and ovaries in 1876. The patient, a rhachitic primipara, recovered. The modifications of Porro's operation by Professor Müller and Professor Veit had not been followed by sufficient success to justify the hope that they would supplant the original operation. Up to this time Veit's operation had shown a general mortality of 71·5 per cent.; Müller's had been entirely successful in Italy, but less successful elsewhere. Dr. Harris, of Philadelphia, stated that up to March, 1885, there had been 42 operations by Müller's modification, 21 mothers and 31 children being saved; by the original Porro method, 109 operations, 46 mothers and 85 children being saved.

Regarding laparo-elytrotomy, it seemed little need be said before the Academy, which had witnessed and welcomed its chief public exposition by its distinguished author, Dr. Thomas.

If the application of surgical resources to obstetrics in the ten or twenty years just past had been so beneficent, saving the lives of hundreds of women and children, we had no cause to fear that the future would be less productive of good.

Dr. W. M. Polk referred to the advances which obstetrics, aided by surgery, had made in recent years, and added that, as in every case when the pendulum was held to one side, when it swung it swung far to the other; so the surgeon to-day proposed, possibly, to do more with his knife than the circumstances demanded.

The obstetrician and the gynæcologist had been compelled to fight their way against opposition from two sources; one, the indifference of the profession generally, who looked upon them as physicians rather than as surgeons, and the other a more active opposition from those engaged in surgical work; and in the course of this fight they had attained to what was now regarded as an enviable position. Proof of this was to be seen in the results obtained by the obstetrician and the gynæcologist in abdominal surgery. The day would come speedily when it would hardly ever be necessary to do that most repulsive of all operations, craniotomy. When we could avoid that by successful Cæsarean section, he thought we could affirm that the greatest work in surgery belonged to the obstetric physician.

Dr. Fruitnight admitted that nature would often repair the ruptured perinæum when cleanliness was observed, but he thought the primary operation should be performed, as union was apt not to take place otherwise.

Dr. Fordyce Barker said he had not come with the expectation of speaking, but, since he had been called upon, he would make a few remarks. First, he thanked the author of the paper and Dr. Polk for the kind allusion made to him as a conservative teacher. He accepted the position which had been assigned him, that of a midwife or obstetrician rather than that of a surgeon. He was not constitutionally inclined to accept new propositions because they were new. On the other hand, he was not inclined to deny their truth; but he held his opinion in abeyance until he had time to study the subject. He was going to do to-night what he had not yet done, viz., express an opinion which had come to be pretty definite in his own mind regarding the operation for repairing the perinæum immediately after the laceration. It had been several years since a gentleman prominent in the profession had stated it as his belief that any physician who did not close a laceration of the perinæum by the immediate operation neglected his duty. It had seemed to Dr. Barker rather a strong proposition to make, but he had concluded to wait and watch. He would now state this fact, which might seem a little audacious, but he would challenge any contradiction of it: In no case of confinement which he had attended had the secondary operation for rupture of the perinæum ever been performed; in no case had it ever been required. He would not say that he had not had any lacerations. He had had them, but he had watched them very carefully, and taken great care of them, and the secondary operation had never been called for. He spoke of private practice. He could not speak so positively regarding hospital patients, as he had not been able to follow them so closely. In no case of his had the primary operation been performed until last winter. It occurred at a time when a peculiar form of epidemic prevailed, lasting from about the first of January until the first of February. Usually no symptoms manifested themselves until about the sixth day after confinement, when they would explode violently, the temperature going up to 105° or 106° F., with an extremely rapid pulse and hurried breathing. It so happened that he saw forty such cases, but only one in his own practice. Only one patient died. In five of the cases the primary operation for laceration of the perinæum was performed; in only one did union take place, and that patient died four weeks later. His own case was one of justo-minor pelvic contraction, and, after waiting longer than usual, he delivered with Tarnier's forceps. The child weighed over eleven pounds. A very extensive perineal laceration took place, which was brought together with sutures at once, but union failed. He had repeatedly watched with great interest the operation as performed by others. In two cases he had seen shock, exhaustion, and dangerous hæmorrhage. There might be cases in which the condition of the patient was so favorable that it would be wise to perform the primary operation, but he should say it was safer as a rule to observe cleanliness and see that the general functions of the system were healthfully performed, with the hope that the patient would recover without an operation, and in the majority of cases that hope would not be disappointed.

The title of Dr. Lee's paper suggested a wide field for discussion. Obstetric and gynæcological surgeons had produced a revolution in all questions connected with abdominal surgery. Dr. Barker referred to the discussion which took place between Dr. Sims and Dr. Wood a few years ago on the subject of laparotomy for wounds of the abdomen, and a case had been suggested to his mind on that occasion from which the following principle could be deduced, namely, that when the condition suggesting the operation was due to a source of irritation which was rapidly destroying life, and the operation would remove that source of irritation, it was an argument in favor of performing it. The case referred to was one of abdominal tumor which had given rise to pus in the abdomen and peritonitis. Sir Spencer Wells was present, and, being asked whether the patient's condition admitted of the operation, answered that, when there was peritonitis with pus in the abdomen due to the presence of a tumor which required an operation, the peritonitis and pus were not contra-indications, but were indications for the operation. The operation was performed in an apparently most unfavorable case, but the patient recovered.

Dr. Malcolm McLean, with all respect to Dr. Barker, must say that he had had better results in laceration of the perinæum when he inserted a single silk suture immediately after its occurrence than when he trusted simply to cleanliness. The suture should be deeply and properly placed, and without undue disturbance to the patient. He would not use silver wire. Nowadays women felt that the obstetrician had not done his duty when he left a laceration unrepaired.

Dr. H. J. Boldt protested against the primary operation for lacerated cervix, except when there was profuse hæmorrhage.

Dr. Polk, being asked by Dr. Barker his present opinion regarding the primary operation for laceration of the perinæum, said that, unless, as occurred in exceptional cases, there were shock and exhaustion contra-indicating it, he would close the wound with silk sutures, not wire.

Dr. Lee did not think it advisable to repair mere abrasions of the fourchette, but his experience in an institution where many primiparæ were confined, and in private practice, had confirmed the advantage of the immediate operation in more marked lesions. He continued the chloroform which was usually called for during delivery in such cases, turned the patient across the bed, and in a few minutes the operation was done. The preparations for the operation were made before the confinement. He did not use silver wire.

ALUMNI ASSOCIATION OF THE WOMAN'S HOSPITAL.

Second Meeting.

Cicatricial Tissue in the Lacerated Cervix Uteri.—Dr. W. Gill Wylie said that, in a paper read before the New York County Medical Society in November, 1881, and published in the "American Journal of Obstetrics and Diseases of Women and Children," vol. xv, January, 1882, he had endeavored to show that it was diseased gland follicles in the angle, rather than a cicatricial plug, that caused the trouble. Undoubtedly an imperfectly developed cervix, or one indurated and rendered inelastic by disease of the gland follicles, was quite certain to be torn. Or, if a cervix was torn, and septic endometritis, even of a very mild type, followed the labor, the torn tissue would not heal, but become chronically diseased. Unless a tear was associated with diseased tissue, it would do no harm except in those cases in which the sphincter power of the cervix was injured, unless the tear extended to the vaginal junction or to the os internum. As a rule, his object in operating, in almost all cases, was to remove the diseased tissue rather than to close the laceration. The hardened tissue at the bottom of the angle was indurated muscular tissue, which was very hard and tough when normal. A sharp knife, properly used, could be made to take out a clean-cut triangular piece, when, if scissors were used, it must be dug out with the points, and was a ragged plug.

Dr. Clement Cleveland, of New York, said that his views were in harmony with those of the author on this question. When he left the Woman's Hospital as an interne he left it fully believing in Dr. Emmet's views, and a considerable experience since then had only strengthened that belief. He did not think, however, that the cicatricial plug alone did the harm. In most cases there was more or less subinvolution, which played its part as well as the cicatricial plug. He did not regard it as necessary to remove every particle of the cicatricial tissue. It was important to remove a large portion of the mass, but, if a little only was left, he thought absorption would go on in that as well as in the remainder of the subinvoluted uterus.

Dr. P. H. Ingalls, of Hartford, thought that removal of the cicatricial plug, or, at any rate, of the diseased tissue, whether cicatricial tissue or diseased glands, would often cure the patient, even though the operation for laceration failed. He had had one such case, having been compelled to operate too soon, as the patient had to return to her home. He removed the dense tissue, and thought all was cut away, but the wound did not unite. There was, however, marked relief from the nervous symptoms. He had not seen the patient since, and was unable to say whether the subinvolution disappeared.

Dr. George T. Harrison, of New York, had had extensive opportunity for observing the effect of laceration of the cervix associated with cicatricial tissue, not only in his own practice, but also in the public and private hospital practice of Dr. Emmet, and he had seen such benefit follow the operation as performed by Dr. Emmet that he was compelled to acknowledge the importance of the cicatricial plug, or whatever name it might receive. The most marked results from the operation were obtained in cases of extensive laceration giving rise to parametritis. There was not only great improvement in the general condition of the patient, but also relief from reflex neuroses. This experience was similar to that of Dr. Bradsky. Last December Dr. Harrison operated upon a patient who, before being anæsthetized, seemed to have only a slight laceration of the cervix; but, after she was put under the influence of ether, a very considerable amount of cicatricial tissue was found. The patient had been suffering from leucorrhœa and a variety of symptoms, and the relief which followed the operation was very great.

Dr. Charles H. Riley, of Baltimore, referred to a case in which a physician had operated upon a patient for lacerated cervix, but had failed to remove the cicatricial tissue, and she had suffered more after the operation than she had before. The case illustrated very well the fact that, when cicatricial tissue was present in considerable quantity after an operation, the operation should be repeated.

Dr. William H. Baker, of Boston, thought the ordinary operation for laceration of the cervix uteri was especially indicated in the cases related by Dr. Moseley, and that it did good; but could we reason, from the fact that good results followed in these cases, that it was positively the cicatricial tissue which had caused the symptoms? The last case related by the author, the one operated upon three times by Dr. Emmet, and also the case referred to by Dr. Riley, lent pertinence to this question. Dr. Baker had recently had a similar case. The patient had been operated upon by some physician, apparently successfully, except that her symptoms had continued. Subsequently, other measures having failed, a second operation was performed, at which a cicatricial plug, of about half the size of the last phalanx of the little finger, was removed, and the patient left the hospital completely relieved. Dr. Baker thought there was something in addition to cicatricial tissue in the cervix which gave rise to the symptoms. The preponderance of tissue in the cervix was connective rather than muscular, and a laceration established hyperæmia, which resulted in hyperplasia of the connective tissue. Afterward there was contraction, and the density of the structure was then such that it became difficult to distinguish it from a true cicatrix.

Dr. A. B. Townshend, of New York, said that the point made by Dr. Ingalls, that, a large amount of tissue being removed, improvement would follow, although the wound did not close, was well illustrated in a case that occurred in Brooklyn about two months ago. The patient had been operated upon about a year ago by the most superficial denudation, leaving the dense tissue behind, and covering it by the mucous membrane. The laceration was posterior. He found that the woman was completely run down, and suffering from all the reflex symptoms imaginable. He operated, and left an excavation, after removing the cicatricial tissue, which was alarming. The wound was closed as well as possible. About the seventh day after the operation the patient had a considerable hæmorrhage. The stitches, or a part of them, had given way, and since then the closure had been by granulation, just as it, probably, had taken place after the original tear. But the patient had been relieved of all her nervous symptoms. It seemed probable that the pressure of the cicatricial tissue, rather than the original tear, had caused the symptoms.

Dr. A. P. Dudley, of New York, believed firmly that it was important to remove the dense tissue in the cervix. Some of the speakers had mentioned cases in which the operation had failed. He would call attention to a result of this dense tissue or of the laceration which developed before the operation was performed—namely, a fungous condition of the endometrium dependent upon arrest of involution and consequent congestion. If we operated and succeeded even in getting out all the dense tissue, but left the fungous condition of the endometrium, the operation would prove a failure.

Dr. Henry C. Coe, of New York, said that he would venture to criticise the expression "cicatricial tissue," which had been so freely employed by the reader and by all but one or two of those who had taken part in the discussion. He had entered his protest against it on several occasions. Many observers had sought in vain for some substantial microscopical evidence of nerves in such masses of condensed tissue. He agreed with Dr. Wylie and Dr. Baker in believing that the so-called "plug" was not really of a cicatricial character, but consisted essentially of cirrhotic or condensed fibrous tissue. He had sought for nerve-filaments within the tissue, but he had not succeeded in finding them, either in the plug itself or in the tissue of the cervix immediately beneath the plug. It therefore seemed to him imaginative to compare these fibrous masses to the painful cicatrices which were sometimes met with in general surgery. It was well known that the normal cervical tissue was often quite hard and semi-cartilaginous, especially after it had undergone senile changes, so that in lacerations of the cervix in old subjects it was difficult to distinguish, either by the touch, by inspection, or by microscopical appearances, the difference between the normal tissue and that in the angle of the tear. Clinically he had been equally unsuccessful in demonstrating to his own satisfaction that the tissue in the angle of a lacerated cervix ever became so exquisitely sensitive as the pseudo-neuromatous cicatrix of an amputation stump, for example. He could recall but few instances in his experience in which firm pressure upon the plug had caused marked pain, and none in which extreme agony or reflex phenomena had followed such pressure. Inflammation of the uterine lining membrane or of the circum-uterine tissues might account for much of the pain. The cervix uteri was comparatively insensitive, as was shown by the absence of unusual pain during cutting operations performed without ether. In view of this low degree of painful sensation, the cervix could hardly be regarded as such an important center for reflex neuroses. He did not deny the reflex theory *in toto*, but it seemed to him that existing views on this subject must undergo some modifications.

Dr. Harrison, referring to Dr. Coe's remarks, said that, while the intra-vaginal portion of the womb was not sensitive in the healthy state, yet when diseased and in a condition of hyperæmia it was exceedingly sensitive. He referred to a case in which every time he had brought his finger in contact with the diseased cervix the woman had vomited. He thought at first that the cause was something else than the diseased cervix, but the fact was elicited at three different examinations. In another case the patient made no objection to the examination until his finger came in contact with a point of hardened tissue in the cervix, when she shrieked with agony.

Dr. James R. Goffe, of New York, thought that there might be cases in which there was great tenderness of the cervix, but he thought that, as a rule, it was not sensitive as compared with other pelvic organs. The statement made by Dr. Coe, that we could dig out the cicatricial plug and close the wound without administering an anæsthetic, he doubted. He had seen but one case in which it was done, and that was at the Woman's Hospital. The operation was poorly performed, and apparently, as the result of the jerking and twitching of the patient and the pulling upon the uterus, there followed a pelvic abscess. He had met a gentleman from Detroit who had said that he never thought of giving an anæsthetic when operating upon the cervix uteri, but Dr. Goffe thought that the operation must be different from that performed in New York.

Dr. Coe said that, without taking up the subject of operating without an anæsthetic, he wished simply to emphasize the fact that the cervix was not, as some writers had stated, an extremely sensitive organ which responded to trivial irritation. He maintained that it was not highly sensitive, but, of course, there might be peculiar conditions in which it was so. As a rule, he believed it to be about the least sensitive portion of the genital tract.

Dr. G. W. Porter, of Providence, thought that the case related by Dr. Townshend offered an excellent opportunity, if carefully watched, for determining whether the symptoms in laceration of the cervix were due to contraction of hyperplastic tissue, as spoken of by Dr. Baker, or whether they were due to diseased glands and follicles, as maintained by Dr. Wylie.

Dr. Townshend said that in health the cervix was perhaps about the least sensitive portion of the body, but he was sure that in more than half of the cases in which it contained a cicatricial plug it exhibited more than an ordinary degree of sensitiveness, and often a high degree.

Dr. J. B. Hunter said that his clinical experience agreed with that of Dr. Moseley. He knew of no operation which had been more satisfactory than that for laceration of the cervix. It made no difference clinically what we called the diseased tissue; we were agreed as to the propriety of removing all we could find. With regard to sensitiveness of the cervix, he had operated upon eighteen or nineteen patients without ether because there was good reason for not giving it, and in not one of the cases had there been much difficulty in doing the operation. Of course it was not so satisfactory as with an anæsthetic, because there was not so much relaxation, and the uterus could not be drawn down so well. One patient had said the operation was not more disagreeable than having a tooth plugged. He thought that in Dr. Harrison's case the influence upon the uterus itself, or upon the ovaries, might have had something to do with the pain.

Dr. Moseley, in closing the discussion, said that the nature of the tissue in the lacerated portion of the cervix would have to be determined by the pathologists. The four cases which he had selected out of a list of cases had been chosen because in them there had seemed to be absolutely no other cause for the symptoms. As to sensitiveness of the cervix, he had seen a number of patients operated upon under cocaine, and, although there was no pain during the stage of denudation, yet as soon as the deeper tissues were reached, and sutures were inserted, there was exquisite sensitiveness. That fact, it seemed to him, was an answer to the ordinary theory that the pain was reflex, from pressure on underlying tissue.

(*To be continued.*)

Reports on the Progress of Medicine.

MATERIA MEDICA, PHARMACY, AND THERAPEUTICS.

Strophantin.—Professor T. R. Fraser, of Edinburgh, made public ("Brit. Med. Jour.," Nov. 14, 1885) the results of his studies and observations with this drug in a valuable paper presented at the last annual meeting of the British Medical Association, on July 28, 1885.

Strophantin is obtained from the plant *Strophantus*, which belongs to the natural order of *Apocynaceæ*, and is widely distributed throughout equatorial Africa. The seeds of the plant are very active, and, when coarsely ground and formed into a paste, they constitute the poison with which arrows are smeared. Strophantin is obtained from the seeds, though it exists in small quantities in the leaves and bark of the plant. It is a crystalline body, having a strongly bitter taste, readily soluble in water and in rectified spirit, and practically insoluble in ether, chloroform, benzole, and petroleum spirit. It is essentially a muscle poison. Introduced into the body, in whatever manner, it increases the contractile power of all striped muscles, and renders the contractions more complete and prolonged. In lethal doses it causes the rigidity of contraction to become permanent and to pass into the rigor of death. As a result of the action on muscle, the heart is easily and powerfully affected, and, by regulating the dose, the effects of the drug may be practically limited to the heart. The changes it produces in the heart's action are similar to those produced by digitalis and other members of this group. It is a curious fact that the lymph-heart of the frog—also a rhythmically contracting muscle—is but slightly affected by the action of strophantin. The paper embodies a number of valuable pulse-tracings showing the striking effect the administration of the remedy had on the pulse even in so short a period as twenty minutes, which effect was maintained for twenty-four hours. Associated with the pulse-tracings are the clinical records of the cases—five in number. There was a very marked increase of urine in all the cases. The remedy was employed chiefly in the form of a tincture in five-minim doses. Hypodermic injections were administered in a few instances, but are objectionable from the local irritation that they set up. In his observations the author gained the impression that strophantin was more powerful and more rapid in its action than digitalis. To test the validity of this impression, he made several experiments with solutions of the two drugs on the separated frog-heart. He found that a solution of digitalis (1 part in 100,000) produced characteristic changes in the heart's action, but was not sufficiently strong to kill the heart, at any rate not within two hours. With strophantin, on the other hand, a solution of 1 part in 100,000 quickly stopped the heart's action in extreme systole. This solution was then diluted until one was reached of 1 part in 6,000,000. This produced complete stoppage of the heart's action in extreme systole in about twenty minutes. Continuing his experiments with solutions of varying strength, he found that, while a solution of digitalis (1 part in 20,000) produced extreme contraction of the blood-vessels, it required a solution of strophantin (1 part in 2,000) before even a temporary effect on the blood-vessels could be appreciated. Comparing the two drugs therapeutically, the author gives the preference to strophantin in cardiac disease where increased tension of the blood-vessels is a hindrance to the heart's action. It is not so likely, he says, to produce gastro-intestinal disturbances as digitalis, and he has never witnessed any evidence of cumulative action during its continued administration.

Adonidin, a New Cardiac Remedy.—Dr. Armand Durand publishes ("Bull. gén. de thérap.," January, 1886) an article on the new cardiac remedy, adonidin—a glucoside obtained from the plant *Adonis vernalis*. Adonidin is an amorphous mass, colorless, odorless, very bitter, very slightly soluble in ether and in water, but dissolving readily in alcohol.

Physiological Effects on Cold-blooded Animals.—If a diluted solution is injected into the posterior lymph-sac of a frog, it is noticed, after a time, that the contractions of the left ventricle increase in vigor. The increased vigor of the contractions continues for some time, though the contractions diminish in number. The same effects were witnessed when two drops of the solution were allowed to fall on the surface of the exposed heart. In warm-blooded animals similar effects occur; but in these three distinct stages are to be observed. In the first stage there is slowing of the cardiac contractions, with increase of the arterial tension. In the second stage the pulse is more frequent, and the blood-pressure is increased. In the third stage the frequency of the heart's contractions is increased, but the pressure is diminished in the arteries. Lesage has witnessed the mercury mount up to from 16 to 36 centimetres in the two first stages. The author records the clinical notes of four cases of mitral insufficiency in which the remedy was administered with marked benefit. An analysis of the therapeutical effects of adonidin in these cases furnished the following data: 1. It regulated the heart's contractions when they were irregular. 2. It markedly diminished the number of cardiac contractions. 3. It increased the vascular tension in every case, and transformed a weak, miserable pulse into a full and strong one. 4. It had no effect upon the symptom of palpitation. 5. In one of the cases it relieved the dyspnœa. 6. It had a striking effect upon the quantity of urine excreted, in some cases increasing it to double the amount in a few days. 7. Only in toxic doses (twenty centigrammes = three grains) did it produce vomiting and diarrhœa. These symptoms were never observed when the drug was given in the ordinary dose—two centigrammes (one third of a grain).

The author sums up the results of his observations as follows: In doses of one third of a grain, adonidin (1) increases arterial tension; (2) regulates the heart's contractions; (3) diminishes the frequency of the pulse; (4) increases the force of the heart's contractions; (5) rapidly increases diuresis; (6) is not cumulative. The indications for its use are the same as for digitalis.

Terebene in Winter Cough.—Dr. William Murrell relates ("Brit. Med. Jour.," Dec. 12, 1885) his experience with the administration of terebene in those persons who suffer almost every winter from a severe cough arising from a chronic bronchitis. He kept notes of one hundred and fourteen such cases occurring in the hospitals with which he is connected and in his private practice. Terebene is prepared by the action of sulphuric acid on oil of turpentine. It is an agreeable remedy, being a clear, colorless liquid, with an odor like that of fresh-sawn pine wood. It is not the same as the patent medicine sold under the name of "terebene." It is best given dropped on sugar, and it is well to begin with five or six drops every four hours, and to gradually increase the dose to twenty minims. The only disadvantage connected with the administration of the drug is the peculiar and characteristic odor it imparts to the urine. It can be used in the form of a spray, and then one or two ounces should be diffused and inhaled every week. Used in this way, the author has observed marked improvement in every case of winter cough. He also used terebene as a dry and antiseptic inhalation on the cotton-wool of a respirator in phthisis, and was very much pleased with the results. In one case, that of a young lady, the respirator was worn almost continuously night and day for nine months, and the right lung, which was breaking down, cleared up, the temperature becoming normal, and the cough and other symptoms subsiding. Dr. Murrell found the remedy useful internally for a combination of symptoms—such as flatulence with dyspepsia, and the train of symptoms that accompany it. Patients like it, and often continue taking it for months and years. Lately the author has tried a combination consisting of equal parts of pure terebene, oil of cubebs, and oil of sandal-wood, mixed with liquid vaseline. This formula, he found, gave excellent results, not only in winter cough, but also in post-nasal catarrh, used with an atomizing apparatus invented by Mr. W. F. Semple, of Ohio. "Pure terebene," the author says, "is a valuable remedy, and will in time come largely into use."

Hypnone.—M. Dujardin-Beaumetz and M. G. Bardet publish ("Bull. gén. de thérap.," Jan. 15, 1886) the results of their investigations with hypnone. The body is a compound acetone, having for its formula C_8H_8O, and is chemically known as phenylmethylacetone. It is obtained by distilling a mixture of benzoin and acetate of calcium. At the ordinary temperature it is a liquid, but on the reduction of the temperature, 4° to 5°, it forms into crystals. It is a colorless liquid, very volatile, and boils at 198° F. As yet it has not been manufactured on a large scale, and in consequence is expensive ($1 an ounce). It is insoluble in water and in glycerin, but is very soluble in alcohol, in benzoin, and in turpentine. Its odor resembles that of new-mown hay, is very persistent, and renders the drug difficult of administration. To disguise the odor and taste, the following formulæ are recommended: (1) Hypnone, gtt. j; alcohol, ♏ xv; syrup of orange, ʒ jss. (one dose). (2) Hypnone, gtt. j; alcohol, syrup of mint, āā ♏ xlv.

The physiological and toxical effects of hypnone vary in different animals and according to the mode of its administration. Injected under the skin of a rabbit it produces sleep, and in large doses causes coma, which soon passes into death. It always produces local loss of sensibility at the seat of injection. This feature was remarkable in the frog, in which a drop injected under the skin of the leg produced insensibility of the leg with loss of its reflexes. In the dog its action is quite different; three grammes (♏ xlv) injected under the skin of a dog had no effect, but the same dose administered by the stomach always brought on sleep, provided its irritant action did not provoke vomiting. In a healthy man 20 cgr. (♏ iij) of hypnone is followed by a sensation of warmth in the stomach, in fifteen to forty-five minutes by sleep. The sleep is usually calm and profound; the awaking is generally easy and is not attended with nausea or anorexia, as is frequently the case with chloral or paraldehyde. In some cases, however, the sleep is followed by headache and heaviness over the eyebrows.

A very interesting and important feature of hypnone is its power of increasing the anæsthetic qualities of chloroform. The experiments of Dubois and Bidot seem conclusive on this point. These experimenters found that a dog could be more easily anæsthetized with chloroform if one cm. of hypnone had first been injected under the skin, and, on the anæsthesia passing off, another injection would bring a return of the anæsthesia. According to Dubois and Bidot, it is much more valuable than morphine as an aid to chloroform. Hypnone having only very slight analgesic properties, it is unsuitable in insomnia arising from pain, or from a persistent cough, or from a febrile state. It is particularly efficacious in sleeplessness from nervousness or alcohol. In morphinism it fails like most other hypnotics. The system does not become easily habituated to the drug, and it can be given for a long time without the necessity arising of increasing the dose. It is not suitable to be given hypodermically, on account of the local irritation it sets up and its inefficiency when administered by this method. The authors think that hypnone should rank with chloral and paraldehyde; though inferior to the former, it is almost the equal of paraldehyde. They consider themselves warranted in arriving at the following conclusions: 1. Hypnone is a mixed acetone of the aromatic series. 2. It is a toxic, and its toxic effects depend upon the greater or lesser degree of its purity. 3. In toxic doses in animals it causes sleep, analgesia, and anæsthesia, and diminishes the irritability of the nerves, lessens considerably the blood pressure, modifies the respiration, and changes the composition of the blood. 4. In massive doses, 20 to 40 cgr. (♏ iij–vj) in man, it never produces any other appreciable symptom than sleep; it is a hypnotic particularly suitable in nervous insomnia and in the insomnia brought on by abuse of alcohol and prolonged intellectual labor.

Arsenic in Chorea.—Dr. W. B. Cheadle adduces several interesting facts ("Practitioner," February, 1886) to show that arsenic in chorea is positively of benefit. A comparison is given of the duration of cases treated on the expectant plan and those treated by arsenic, with a striking advantage in favor of the latter. He had experimented with many other drugs, and from a very large experience he makes the following deduction: That arsenic is the only drug which appears to possess decided power to shorten the duration of chorea as well as to mitigate the symptoms during the course of the disease. The author's method of administering the drug is the following: From three to five drops of liquor arsenicalis in water, or in two drachms of wine of iron, are given twice or three times a day, and the dose is increased by one minim every two or three days until it reaches ♏xij, the usual limit of toleration of the drug. The liquor arsenici hydrochloratis may be given with or without perchloride of iron in the same manner. On the occurrence of gastric symptoms the arsenic is omitted for two or three days, a calomel purge given, and the medicine resumed in smaller doses as soon as the disturbance has subsided. *The author has met with four cases of arsenical bronzing.* The discoloration in the most severe form resembles that met with in the lighter staining of Addison's disease. In three of the cases the bronzing faded away after a longer or shorter period. In one of the cases the discoloration was permanent. In this case the patient had been under treatment by large doses of arsenic for some two years. The cause of the bronzing seems to be an increased deposit of pigment in the rete Malpighii, owing to prolonged hyperæmia, as in the case of maculæ following eruptions.

The Physiological Action of Thalline.—G. Pisenti ("Ctrlbl. f. die ges. Ther.," Heft xi, 1885) publishes the results of several experiments made with thalline on different animals, especially on frogs, guinea-pigs, and dogs. Frogs are the most susceptible of all to the drug. Five minims injected subcutaneously caused a decrease of the voluntary movements; when placed on their backs the animals could not regain their normal position. The reflex of the cornea remained intact. After three hours the frogs completely recovered. Larger doses (1 cg.) caused the corneal reflex to disappear and arrested the respiration, but the heart continued to beat, though slowly and with intermittence. The electrical excitability of the muscles remained intact. The same results were obtained with larger doses (2–5 cg.); they merely acted more rapidly. In guinea-pigs in doses of 5 cg. and more the only effect noticed was a diminution in the activity of the animal. Dogs also tolerated large doses of thalline without manifesting any particular symptoms. In one dog only there were noticed a slight tremor and a peculiar interruption of the breathing. Thalline, in common with other bases of quinoline, has an energetic anti-fermentative power. It has, also, as the experiments on dogs and guinea-pigs showed, the power of reducing the normal temperature. The drug is eliminated by the kidneys and also by the liver, as was evident in one dog that had a biliary fistula.

Lactic Acid in Tuberculous Laryngitis.—Dr. Edmund Jelinck ("Ctrlbl. f. d. ges. Ther.," xii, 1885), influenced by the results Krause obtained with lactic acid in tuberculous affections of the larynx, has made extensive use of that drug in similar affections in Professor Schrötter's Poliklinik in Vienna. The author employed a twenty-per-cent. solution at first, which later on he increased to fifty per cent., and in some cases has used the pure acid. He was well gratified with the results, and, although not alleging a curative effect on the tubercular affection, the author is of the opinion that lactic acid forms a valuable therapeutic means for the local troubles in the larynx of phthisical patients, which often are so annoying both to the patient and the physician. Jelinck obtained the best results when the tuberculous deposit in the larynx had undergone ulceration or appeared in the form of a diffuse œdematous swelling. In many of the cases the timely application of the lactic acid obviated the necessity of performing tracheotomy. A serious objection to the drug is the severe pain which attends its application, but, notwithstanding this, the patients always asked to have the application repeated, the relief they had obtained from the first being so marked. The pain produced by the application may be mitigated, however, by the use of cocaine. Jelinck prefers making the application by means of cotton-wool wrapped around a suitable instrument than by a brush, as the former takes up more fluid and can be made so as to cover a larger surface. The author has used lactic acid in the hypertrophic and atrophic forms of pharyngitis with good results, and found it of great value in the treatment of scrofulous rhinitis.

Ustilago Maidis.—Dr. James Mitchell contributes ("Therap. Gaz.,' Apr., 1886) a valuable article on the physiological action of ustilago maidis on the nervous system. Ten to fifteen minims of the fluid extract injected into the posterior lymph-sac of normal frogs produced profound narcosis. At first a semi-comatose condition was noticed; this was followed by a short period of excitement, succeeded by muscular tremors and clonic spasms. The muscular irritability appeared to be greatly increased. All these symptoms then terminated in paralysis. If the dose was insufficient to produce death, all the symptoms subsided, the paralysis disappeared, and in the course of from one to two hours the animal appeared to have regained its normal condition. In full toxic doses the immediate cause of death appears to be paralysis of respiration, as the heart is found beating rhythmically after all the external signs of life have ceased. The author made several experiments to ascertain the cause of the paralysis, and offers the following conclusions: That the ultimate action of ustilago maidis upon the nervous system is that of a general depressant, producing a diminution and final extinction of all reflex and volitional phenomena, with the early induction of narcotism. That the loss of reflex activity is due to the paralysis of the sensory (receptive) portion of the cord. That the motor portion of the cord is also depressed, as well as the motor nerves. That it is also probable that the sensory nerves share in the general paralysis. The drug is classed in Wood's "Therapeutics" as an oxytocic agent. The author places in parallel columns the action of ustilago maidis, potassium bromide, and ergot of rye; on comparing these, it is found that the first two resembled each other very closely in their physiological action on the nervous system.

Pichi (Fabiana Imbricata) in Cystitis.—Dr. H. C. Wyman reports (*Ibid.*) six cases of cystitis in which he has employed the new remedy —pichi. In all—two acute and four chronic—the employment of the fluid extract of pichi in ♏xv doses every two or three hours was followed by a complete recovery. The author professes to have had good results with the remedy in numerous cases of lumbago and sciatica attended with lithuria or phosphaturia. He favors the following formula:

℞ Ext. pichi	fl ℥ j;
Potass. nit.	ʒ j;
Elixir simp.	℥ iij.

M. A teaspoonful every two hours.

Iodol in Surgical Practice.—Dr. Gaetano Mazzoni ("Ctrlbl. f. d. ges. Ther.") obtained from his assistant in the laboratory a new chemical preparation, named iodol, which apparently has the same properties as iodoform. It is a yellowish powder, tasteless, and with scarcely any smell. The drug was applied either as a powder, or suspended in glycerin, or in the form of an ointment with vaseline. In venereal sores it gave brilliant results. It was applied in the same way as iodoform is commonly applied. In other than venereal sores, iodol showed itself efficacious. It was used with good results in gangrenous and atonic ulcers, but was found useless in necrotic and highly gangrenous ulcers. In a case of hypertrophic lupus it was employed in the form of injections into the surrounding subcutaneous tissue with the effect of preventing the spread of the affection. An alcoholic solution of iodol injected into the joint in three cases of fungous disease of the ankle joint caused the disappearance of the vegetations in a relatively short course of time and effected a cure. In conclusion, the author remarks that in no case treated by iodol did erysipelas or diphtheria make its appearance, and in cases of diphtheria evoked by mercurial treatment the employment of iodol caused a rapid disappearance of that affection.

Miscellany.

The Antwerp Congress.—Dr. E. N. Brush, of the Pennsylvania Hospital for the Insane, Philadelphia, writes to us as follows in regard to the matter of the resolutions passed by the Society of Medical Jurisprudence about the representative of America at the Congress: "It appears to me that, if the United States is to be represented in the Committee on Nomenclature of the Antwerp Congress, the Association of Superintendents of American Institutions for the Insane is by all means the body from which such, or at least a portion of such, representation should be drawn. As it is at present, American psychological medicine seems in a fair way to be very well misrepresented."

Appointments to the Medical Corps of the Navy.—A correspondent wishes to know how the appointment is obtained, what the compensation is, and "if there is any chance of a young doctor's obtaining this position without influential friends."

The appointment is obtained only as the result of a rigid competitive examination, and "influential friends" are not only of no use to the applicant, but positively prejudicial. The pay at first is at the rate of $1,700 a year when at sea, and $1,400 when on shore duty. For further particulars, see our issue for February 24, 1883.

The International Medical Congress.—A well-known American physician writes to us from Berlin, under date of June 30th, that he has lately come in contact with prominent members of the profession in that city, Bremen, Hamburg, Dresden, Munich, Vienna, and Breslau, and that everywhere the leading questions were: "What about the Congress of 1887? Will it be held? Will it be a success? Will you be there? How much reduction will there be in the passage rates? Is it to be managed by homœopaths? Have the dissensions which threatened to wreck the Congress been adjusted? Whom shall we meet whom we know?" etc. To these queries he felt it his duty to answer: "The Congress will surely be held. Whether it will be a success, can not now be foretold. I shall not be there. So far as I know, there will be no reduction in fares to America. The homœopaths have nothing whatever to do with the Congress. The dissensions have not been adjusted in any sense whatever. You will be likely to meet chiefly men whom you do not know by name or fame, since the majority of the best-known men in the United States have withdrawn from the Congress because they do not approve of the way in which it is managed." "With but few exceptions," he adds, "I found very little inclination to incur the trouble and expense of a trip across under such discouraging auspices. My replies only corroborated previous impressions."

Matzoon.—This is the name of a nutrient and refrigerant preparation of fermented milk lately introduced into New York by Dr. Markar G. Dadirrian, a graduate of the Medical Department of the University of the City of New York, who was for several years a practitioner in Constantinople. It is said to contain a large proportion of lactic acid, which gives it a certain hypnotic action, but no carbonic acid. It is highly spoken of by several members of the profession who have made use of it in their practice.

The Health of Chicago.—During the month of June there were 19 deaths reported from measles, 25 from scarlet fever, 78 from diphtheria, 8 from croup, 4 from whooping-cough, 30 from typhoid fever, 11 from cerebro-spinal fever, 5 from malarial fever, and 110 from diarrhœal diseases. The whole number of deaths for the month was 1,095, 548 of which were of children under five years of age.

Honorary Degrees.—It was on Dr. Henry H. Smith, of Philadelphia, that the degree of LL. D. was recently conferred, and not on Dr. Henry D. Swift, as we were erroneously informed. At the commencement of Alfred University, held lately, the degree of Ph. D. was conferred on Dr. Daniel Lewis, of New York.

The Health of San Francisco.—During the month of June, 11 deaths from cholera infantum were registered, 1 from croup, 9 from diphtheria, 3 from diarrhœa, 1 from dysentery, 2 from erysipelas, 6 from typhoid fever, 2 from measles, 3 from whooping-cough, 1 from parotitis, 1 from pyæmia, and 1 from septicæmia. The whole number of deaths was 397.

Pasteur's Laboratory.—The "Evening Post" quotes as follows from the "Pall Mall Gazette": "A most extraordinary museum has just been opened in the Rue Vauquelin. It is difficult to say whether it should best be called a museum, or a factory, or a farm, or a menagerie. It is in fact all four combined, and grouped together for a purpose hitherto untried, and presenting an appearance hitherto unparalleled. These are the new headquarters of M. Pasteur, and here are to be found cow-houses, sheep-folds, fowl-walks, rabbit-hutches, and dog-kennels. They are all, moreover, fully occupied. On one floor is a laboratory, where the vaccine soups and preparations are made up. Above it a museum, where specimens connected with the new cure are exhibited. There are operating-rooms and rooms for post-mortem investigations and dissecting purposes. Two of the kennels are devoted to dogs in various interesting stages of early or advanced rabies. 'Hen cholera' is communicated, watched, and cured in the fowl-house. The cattle exhibit various stages of vaccination. Human beings have also their provided quarter. A spacious waiting-room is set apart for patients, who troop in daily in picturesque groups—according to the French press—representing all nationalities. In the mean time the great savant occupies the former quarters of the Pasteur Institut in the Rue d'Ulm, and devotes himself in dignified seclusion to scientific research."

THERAPEUTICAL NOTES.

Ethoxycaffeine in the Treatment of Migraine.—The "Union médicale du Canada" credits M. Dujardin-Beaumetz with the following formula:

Ethoxycaffeine, Salicylate of sodium,	each............ 4 grains.

To be taken in a single dose as soon as the pain begins to be felt. By adding a sixth of a grain of hydrochlorate of cocaine, gastric irritation will be prevented.

Hypodermic Injections of Mercury in the Treatment of Syphilitic Keratitis.—Abadie ("Union méd.," July 3, 1886) suggests the following solution:

Corrosive chloride of mercury...........	15 grains;
Chloride of sodium....................	30 "
Distilled water	3½ ounces.

Ten minims contain a twelfth of a grain of the mercurial. This amount should be injected deep beneath the skin of the back. One injection a day is sufficient. When ten have been given, eight days should be allowed to elapse before the next series is given. It is unnecessary to employ more than thirty injections.

Rhamnus Alaternus and Ligustrum Vulgare as Galactagogues.—Dr. Prota-Giurleo ("Morgagni," 1885, 14; "Med.-chir. Rundschau") has long employed the *Rhamnus alaternus* and the *Ligustrum vulgare*, and speaks of the good effects of a decoction of the leaves (3 parts to 130, by weight) twice a day for two successive days.

Corrosive Sublimate in the Disinfection of Rooms.—The "Centralblatt für Chirurgie" recommends the burning of one or two ounces of sublimate in an infected apartment. After three or four hours the vapor is sufficiently diffused, and the windows may be thrown open. Thorough ventilation is necessary before it is safe to use the room.

An Application for Small Angiomata.—Börngen ("Dtsch. med. Woch.," 1886, 17) treats telangiectatic nodules in the following manner: The spot and an area of skin extending 2 mm. beyond it are covered, for four days in succession, with layers of collodion containing four per cent. of corrosive sublimate. A scale about a millimetre in thickness forms, and the cure is rapid and absolutely painless.

A Mixture for Nervous Cough.—Graeffer ("Nouveaux remèdes") recommends the following:

Hydrochlorate of cocaine..............	1 grain;
Chlorate of potassium................	10 grains;
Bitter-almond water.................	10 minims;
Distilled water.......................	1½ ounce.

To be used in the form of spray.

An Ointment for Acute Rheumatism.—Grinevitski ("Russkaya Meditsina"; "Lancet") uses the following:

Oil of hyoscyamus..................	1 ounce;
Mercurial ointment	2 drachms;
Extract of aconite...................	1 drachm.

A Purgative for Infants.—M. Huchard ("Nouveaux remèdes") suggests a tablespoonful of amixture of equal parts of castor-oil and Malaga wine, thoroughly shaken together.

Original Communications.

REMARKS ON SOME POINTS CONNECTED WITH

THE ANATOMY OF THE LARYNX.*

By JOSEPH LEIDY, M. D., LL. D.,
PHILADELPHIA.

[The author made the following verbal communication on some points in the anatomy of the larynx. He premised that she appeared before the association by invitation of the Council He had no elaborate paper to present, but, as he had at various times in conversation with the president, Dr. Allen, expressed some views rather different from those generally held in regard. to the anatomy of the larynx, he had been invited to repeat them, and had consented to do so, in the hope that they might prove of some interest to the association.]

In the first place, in reference to the aperture of the larynx, its lower extremity is formed by the notch of the arytenoids, bounded laterally by a pair of mammillary eminences, of which the lower two compare with the corniculate cartilages (cartilages of Santorini). Those immediately above are usually ascribed to the presence of two little cartilages, the cuneiform cartilages (cartilages of Wrisberg), lying parallel with and just above the corniculate cartilages. These eminences invariably conform to a group of glands, but the cuneiform cartilages are, in our people, according to my experience, oftener absent than present, or, at most, scarcely developed, while they are commonly conspicuously produced in the negro, in which they are often a quarter of an inch in length, as in an example exhibited.

A second point of interest relates to the so-called vocal cords, which are usually described as a pair of elastic ligaments extending from the entering angle of the thyroid cartilage to the prolonged inner angle, or vocal process of the base of the arytenoid cartilages. From their connections they are named the thyro-arytenoid ligaments, or, in contradistinction to the less distinct so-called false vocal cords, the inferior arytenoid ligaments. Physiologically, it may be correct to speak of vocal cords, but anatomically they do not exist as distinct organs. They are nothing but the upper somewhat thickened border of a membrane, correctly named from its attachments the crico-thyro-arytenoid membrane. The thickest portion of this occupies a median position in front of the larynx connecting the cricoid with the entering angle of the thyroid cartilage. Thence it extends along the upper border of the cricoid cartilage on each side to the vocal process of the arytenoid cartilage, and is separated laterally from the thyroid cartilage by the intervention of the lateral crico-arytenoid and thyro-arytenoid muscles. Commonly a narrow band forming the upper border of this crico-thyro-arytenoid membrane is artificially separated from the rest and regarded as the vocal cord, and the crico-thyroid ligament is described as being attached along or continuously with the latter. Properly the crico-thyro-arytenoid membrane would be the vocal membrane the upper border of which bounds the glottis and vibrates in the production of sound, as the edge of a door vibrates when the wind whistles through the crevices.

The appropriate muscles which modify the condition of the vocal membrane through its attachment to the movable arytenoid cartilages are the arytenoid, the posterior and lateral crico-arytenoid, and the thyro-arytenoid muscles. These are all supplied by the same nerve, while the crico-thyroid muscles, which are not so closely related with the condition of the vocal membrane, are supplied by another nerve. The other muscles ascribed to the larynx, such as the aryteno- and thyro-epiglottic muscles, are very variable, frequently feebly produced, and of comparatively little importance.

Intermediate to their points of origin and insertion the arytenoid and crico-arytenoid muscles lie in contact with the subjacent surfaces, attached by loose connective tissue; but the thyro-arytenoid muscle partially arises from the subjacent surface of the vocal membrane.

In conclusion, I do not profess to have made a discovery, but simply intend to express my views, in a measure different from those commonly taught, but perhaps already known to the members of the association.

[Preparations illustrating the points above mentioned were exhibited.]

DISCUSSION.

Dr. J. Solis-Cohen.—Several points of interest have been brought out by the lecturer. The first one is with regard to the cuneiform cartilages, which are said to be so seldom developed in the white, and so largely developed in the colored race. I have often seen them largely developed in whites. In a case to be exhibited at this session for another purpose they are so large that they extend completely across the ventricular bands, projecting beyond them so as to present the aspect of a little tumor. I have noticed that those persons who have the cuneiform cartilages best developed usually have the most control over the voice; possibly because it gives additional room for muscular attachment. The cartilage seems to keep the ventricular band on the stretch, as the ribs keep the cover of an umbrella distended. The second point noticed, with regard to continousness of the vocal band with the crico-thyroid membrane, is of great interest. It furnishes a clew for differentiation between paralyses of the thyro-arytenoid and of the crico-thyroid muscles which present the same picture—the Indian-bow paralysis of the Germans. The diagnosis may be easily made by placing a finger upon the crico-thyroid membrane in front; if the membrane vibrates with the voice, then the case is not one of crico-thyroid paralysis. When the Professor was speaking of voice and the action of the crico-thyroid muscle, he spoke of this muscle pulling down the thyroid cartilage. This the speaker surely did not mean, for, when this muscle contracts, the thyroid does not descend, but the cricoid is elevated. I am glad to hear the explanation given of the relations of the muscles to the crico-arytenoid joint. Owing to their peculiar attachment, the posterior crico-arytenoid muscles not only separate the vocal bands so as to enlarge the glottis, but they increase the tension of the vocal bands by drawing the cartilages backward. If the vocal bands are made tense by the contraction of all the muscles which bring them together—the lateral crico-arytenoids, the crico-thyroids, and the arytenoids—then the posterior crico-arytenoids will help in maintaining the tension of the vocal bands.

Dr. F. I. Knight.—I would like to ask Dr. Cohen whether the means of diagnosis which he mentioned is based on experience or not. Has he ever seen a case of isolated paralysis of the crico-thyroid muscle?

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* Made before the American Laryngological Association at its eighth annual congress.

Dr. Cohen.—I have seen a case which I thought was one of paralysis of that muscle.

Dr. Knight.—Dr. Leidy's demonstration of the extent of the attachment of the crico-thyroid membrane, and its identity with the vocal bands, explains the serious impairment of the voice following the old operation of laryngotomy for the removal of growths, in which a long incision was made from the hyoid bone down to the trachea. It is well known clinically that, when the cricoid cartilage is spared, the chances of a good voice after the operation are very much improved.

Dr. F. H. Hooper.—I have been much interested in the remarks relating to the cartilages of Wrisberg, which recall to my mind a case recently seen at the Boston City Hospital. The patient was an Irishman, about fifty years of age; he had an enormous development of these bodies. His larynx resembled the larynx of a dog. In the dog there is a muscle attached to these cartilages which corresponds, I suppose, to the *dilatator vestibuli laryngis* in man. If this muscle in the dog is stimulated, the cartilage is rotated outward, in the same manner as the arytenoid cartilage is by the contraction of the posterior crico-arytenoid muscle.

Dr. Leidy.—I am pleased to hear the explanation, and I regard it as a very satisfactory one.

The President.—The most interesting point to me is that so small a portion of the surface of the cartilages serves as the origin for the laryngeal muscles; however, this, after all, is only like what is found in other parts of the body. The most delicate muscles everywhere are those which have the least amount of origin and insertion, while large muscles have large surfaces of attachment. In the eye, for instance, the muscles have very well-defined points of origin and insertion.

FURTHER HISTORY OF THE CASE OF PARALYSIS OF THE POSTERIOR CRICO-ARYTENOID MUSCLES

PRESENTED AT
THE FIRST MEETING OF THE ASSOCIATION, 1879.

With Report of Autopsy and Exhibition of Specimen and Microscopic Preparations.[*]

By J. SOLIS-COHEN, M. D.,
PHILADELPHIA.

As the history of the case was given when the patient was exhibited before the association seven years ago, it is unnecessary to repeat it in detail. To quote from the second edition of my book on "Diseases of the Throat," 1879, p. 654.

"In October, 1876, a gentleman, forty-six years of age, of good physique and in apparent health, had suffered for two years or more with cough, dyspnœa, and occasional obstruction, and alarming spasm of the larynx, which had eventuated in loss of consciousness in the street on two occasions. His respiration was labored, inefficient, and attended with such inspiratory stridor in sleep that it could be heard all over his residence. Early in life he had a suppurative inflammation of his left ear, which had eventually subsided. He had been addicted to excessive smoking (fifteen or sixteen cigars a day, and an occasional pipe or two in addition) for many years. Hearing was somewhat impaired. Laryngoscopic inspection revealed paralysis of the posterior crico-arytenoid muscle of the left side, with a tendency to spasm of the glottis, as provoked by the examination. Interrogation revealed the fact that irritation of the left external auditory meatus always induced cough, followed by spasm of the larynx, so that the patient dared not cleanse the ear for fear of exciting a paroxysm. A tentative treatment was instituted, with the addition of a constant supply of nitrite of amyl at hand for inhalation on the occurrence of a spasm. All went well for a few days, when an inadvertent manipulation of the ear brought on a terrific spasm that was reported as well nigh fatal. Recounting this to me next day, while awaiting his attending physician, Dr. Hinkle, in my reception-room, he placed his finger in his ear to illustrate the occurrence, when a severe paroxysm of spasm was provoked just as Dr. Hinkle entered the room, in time to assist me in controlling it by the prompt administration of vapor of chloroform. On the following day I performed tracheotomy, and the patient has been wearing a tube for more than two years (1878). After the operation the patient's hearing improved and remained improved. Color-blindness, however (chiefly interchange of red and green), soon supervened, and ophthalmoscopic inspection revealed progressive atrophy of the optic nerves, which has since increased to very indistinct vision. The tendency to cough and to spasm on titillation of the ear continues, but no lesion is apparent on inspection. Within a few weeks after the operation the right vocal cord became paralyzed likewise, and at the end of about three months the paralysis became so complete, and the tension of the vocal cords and ary-epiglottic folds so marked, that it is difficult to believe that there is not in addition permanent spasm of the arytenoid and lateral crico-arytenoid muscles; for from that time to the present (1878), now more than two years, I have never seen the glottis in any other condition, although there is sometimes just enough separation of the arytenoid cartilages on forcible inspiration to see that they are not welded together; otherwise the condition simulates adhesion of the arytenoid cartilages, as I have seen it in stenosis after syphilis."

During the next four years I saw this patient at various irregular intervals. His larynx always presented the same picture of apparent tonic spasm of the constrictor muscles. Irritation of his ear always produced spasmodic cough. The only special complaint he made was of intense cold in his testicles, as though ice were continuously at the posterior part of his scrotum. He became completely blind. His hearing continued good. His voice remained powerful; he could speak loudly without occluding the orifice of his tube. I did not see him during the last four years of his life. In the early portion of the present year the physician in attendance at his home in another State sent to me for a special tube that I had used shortly after the tracheotomy, as the tubes worn for so many years were giving trouble, by irritating the trachea, probably on account of progressive emaciation in the tissues of the neck. I learned that the patient was gradually sinking by asthenia. He died, and I was offered a long-promised autopsy. Professor Forbes, of the anatomical chair of Jefferson Medical College, was kind enough to accompany me and to make the dissection. With great skill he removed in one continuous mass all the structures involved in the question as to the origin of the laryngeal lesion—external auditory meatus, middle ear, Eustachian tube, palate, pharynx, œsophagus, trachea, and adjacent portion of lungs, aortic arch, heart, recurrent nerves, pneumogastric, cervical cord, medulla, and brain.

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[*] Read before the American Laryngological Association.

After the autopsy I learned from the family that for four years—that is, since my last interview—the patient had had difficulty in walking; that for the last nine months of his life his feet slipped apart when he tried to hold anything in his lap, and that he would strap his legs together before placing upon them the tray from which he fed; that for five months he had been compelled to get into bed on the right side, and then lift his left leg into the bed. He sat with his right leg crossed over the left. The right leg was emaciated and apparently much shortened: probably from being drawn upward upon the pelvis. For eighteen months he had been in the habit of having the calves of his legs tied and strapped together as tightly as possible to relieve pain, and sometimes had his arms bound up to relieve a sense of cold. Numbness of the hands and of the face existed for the last twelve months. For the last two weeks his eyeballs had become fixed. For the last three weeks he had complained of heat, although he had always complained of cold previously. His voice remained very powerful to the last. Toward the last years of his life, I was told, his spasms had subsided entirely, and his cough had almost entirely ceased also. His appetite had remained enormous throughout.

During the autopsy we noticed nothing that threw special light on the case. The general emaciation was extreme—so great that it was hard to recognize the body of my very robust patient. The right leg was much shorter than its fellow. The nares, turbinated bodies, pharynx, palate, and other structures exposed were normal, except two points of erosion in the trachea from attrition by the tube. These occupied portions of the seventh and eighth cartilages. The lungs were healthy, and so were the pleura and the bronchi. There were a very few pleural adhesions. Two darkly pigmented bronchial glands, of the size of small beans, were adherent where the left recurrent nerve diverged from the pneumogastric.

The specimens were immediately carried to Professor Osler, who carefully dissected them, and examined them macroscopically for me that night, placing selected portions of the structures, with the assistance of Dr. Griffith, in preservative fluid for microscopic purposes.

The result of the examination, communicated by Dr. Osler and Dr. Griffith, is as follows:

Heart.—Of medium size; left ventricle firmly contracted; mitral valve normal; left auricle contains a small clot adherent to the valve; wall somewhat hypertrophied; aortic valve normal. Right auricle contains firm leathery clots adherent to valves; valves of right side normal; tricuspid orifice a little large. Aorta a little large; atheromatous patches on the posterior aspect. Left pneumogastric, as it passes over the arch, looks natural. No adhesions. At point of origin of recurrent laryngeal are two pigmented lymphatic glands, closely adherent to the cardiac and pulmonary branches. Traced in its source upon the windpipe, there is no compression. The nerve has a grayish-white natural appearance. The right recurrent is unobstructed in its course.

Brain.—Cerebrum removed. Base: vessels of circle natural in appearance. A few flakes of atheroma on the carotid, Sylvian, and basilar arteries. Olfactory nerves normal in size and in appearance. No lymph, no exudation, no matting about the membranes. Optic nerve and commissure grayish-white, small, and atrophic; the tract scarcely visible. Corpora albicantia natural. Third nerve represented by a small grayish-white thread.

The crura were then cut close to the pons. Pineal gland large.

Third ventricle: Commissures normal. Velum large.

Right hemisphere: General surface of the pia normal in appearance; vessels not overfilled; no special turbidity; no adhesions; convolutions full; sulci natural; no œdema of the membranes. Sections of the hemisphere transversely show no focal lesions or degenerations anywhere. No excessive amount of fluid in the ventricles.

Left hemisphere: Convolutions and membranes look natural. No adhesions. On slicing, a small triangular cavity, about two by four millimetres in extent, is found in the outer section of the lenticular nucleus.

Medulla, pons, and cerebellum: These were removed together. Vertebral and basilar arteries normal; pons symmetrical; sixth pair of nerves grayish, and look quite atrophic; twelfth pair, opaque, white; fifth pair, small, grayish, evidently much wasted; seventh and eighth pairs, opaque, white, full in size, look natural; ninth pair, fibers distinct, clear, grayish white, apparently not atrophic; on the right side they look somewhat larger and more abundant than on the left. Eleventh pair, opaque, white, apparently of normal size.

Anterior pyramids: No obvious change apparent. At its lower part, the right is decidedly smaller than the left. Right olivary body markedly smaller in size than the left; it has lost its fullness, not standing out with anything like the prominence of the left. Arachnoid on the posterior aspect of the medulla is thin and clear. Fourth ventricle exposed: Pia mater a little adherent and thickened beneath the cerebellum. In the lower aspect of the floor, just in front of the calamus, there appears to be a grayish translucency, with two distinct conical or linear depressions just within the restiform bodies. The root-fibers of the seventh are distinct, more so on the right than on the left side. The left restiform body does not look so full in its upper part as the right does.

Microscopic Examination.—Sections were made from both recurrent nerves shortly after their departure from the pneumogastrics. Also from several portions of the pneumogastrics, including the vago-accessory nucleus, within one fourth of an inch of the calamus, from various parts of the medulla, and from the cervical cord a short distance below the calamus. All these were stained after the method of Weigert, so admirably adapted to the revealing of any degeneration of nervous tissue. No pathological change whatever was discovered in the medulla. The olivary bodies were microscopically alike on the two sides. No pathological change was discovered in the left pneumogastric or in the left recurrent. In the right pneumogastric, on the other hand, a diminution in the number of nerve fibrils was evident. In the right recurrent, near to the point where it leaves the pneumogastric, this degeneration of nerve fibrils was very marked. Certain sections from this portion showed some of the funiculi to be of perfectly healthy appearance, and others adjoining them to be completely degenerated. Other sections, made slightly higher in the course of the nerve, revealed one half of a large funiculus to be entirely normal, while the other half contained scarcely a single fibril in which degeneration had not taken place. The line of demarkation between the normal and the affected portions was very sharply defined. The cervical cord, with the exception of the postero-median columns, was unaffected. The regions referred to exhibited some slight degeneration of axis cylinders with thickening of connective tissue.

The Larynx.—The posterior crico-arytenoid muscles of both sides were wasted to a certain extent. That of the left side, especially, showed a degeneration of many of the muscular fibers, with a decrease in their numbers, and an increase in the amount of fibrous tissue of the parts. The oblique fibers of the arytenoideus going from the base of the left cartilage to the tip of the right were also wasted. The remaining muscles were apparently normal.

The larynx herewith exhibited shows the muscular atrophies just mentioned. It will be noticed, likewise, that the vocal bands are not in the cadaveric position, but that they are in the position of phonation—fixed in the middle line. The edges of the central portions of the bands are slightly bowed, owing to the manipulations to which they have been subjected since their removal from the body; but they are in sufficiently close contact to verify the picture published in my book several years ago. There is also some erosion of tracheal mucous membrane, with absorption of the central portion of the seventh and eighth rings from attrition by the tube, which became too long as the patient underwent emaciation toward the last, necessitating a change in the length of the cannula.

Several of the microscopic sections are under the instruments now upon the table. They comprise sections from the medulla just below the calamus; within one fourth of an inch above the calamus; within one half inch above; and at the middle of the valve of Vieussens.

It will be seen that there are no vascular changes, and no essential changes to be noted in the ganglionic cells or in the nerve fibers other than intense pigmentation. There are several sections, also, from the two pneumogastrics and from the two recurrents. Although the neurotic lesion was manifested first on the left side, the recurrent of that side is seen to be intact. In the sections through the right recurrent, at about one inch beyond its point of separation from the pneumogastric, it will be seen that fully one half of the nerve fibers have failed to take the hæmatoxylin stain. In the atrophic region there are from forty to fifty fibers which retain the medulla, and are stained.

The hope, long entertained, that careful examination of this case after death would cast some important light on the pathology of this class of laryngeal neuroses, has not been realized. The disease is evidently central in origin. The nature of the initial lesion producing the degeneration has not been revealed. Sufficient has been shown to prove that the vocal bands can remain in a condition of tonic spasm for a long series of years, and retain that position after death. It is a remarkable circumstance that the left recurrent should be apparently intact, while degeneration should be so marked in the right nerve, which became involved so much later. I may mention that I made inquiry as to whether a mistake might not have been made between the two recurrents, and was assured that no such mistake could have been made. Then, too, the atrophic condition of one set of the oblique fibers of the arytenoideus without participation by any other portion of the constrictor group of muscles is unexpected. The histological pathology of the spinal lesion, so far as our examination went, is that of a case of ascending sclerosis; yet the laryngeal manifestations preceded the others by several years. I greatly regret that I did not have the opportunity for clinical study of the interesting developments of the last years, for the history gathered from the family does not warrant a diagnosis. It is also to be regretted that the entire spinal cord was not removed for study as well as some of the muscles of the extremities. The slight degeneration of the columns of Goll I presume to be secondary, though the absence of clinical studies of this condition as a primary system lesion leaves the question, like too many others in this interesting case, an open one. No lesion of the cortex was discovered, no lesion of the local laryngeal center in the medulla, no lesion pointing to an involvement of any portion of the respiratory centers. The only cerebral condition discovered that may have been connected with the laryngeal symptoms is the small cavity in the lenticular nucleus. I regret that I have no diagram of its site, nor more exact description to offer. If this denotes an interruption in the course of what has been called the "hypothetical cortico-medullar tract" of laryngeal motion, it may have a bearing upon the solution of the case. Other points upon which our examination is incomplete suggest themselves, but it is useless to recapitulate them. Much to my disappointment, I can only lay the facts before you, for even negative facts are of value, and defer theory or explanation to a time when more positive evidence shall be available. So far as the ætiology is concerned, I always suspected syphilis, though I have no evidence of that infection to proffer.

DISCUSSION.

Dr. F. H. Hooper.—I would like to ask if the blood-vessels in the neighborhood of the recurrent nerves were examined. This is very important. Dr. Robinson, of Durham University, England, in his prize essay on "Endemic Goître," speaks of the vascular origin of abductor paralysis. He points out that the posterior crico-arytenoid muscles are supplied by the inferior laryngeal artery alone, and degeneration of these muscles may result from interference with their blood-supply. In a recent paper by Bäumler on "Laryngeal Paralysis in Chronic Lung Affections," the autopsy of one case showed that the arteries near the diseased recurrent nerve were markedly changed, the tunica adventitia being thickened in all, and the media in some, but the most marked change was in the intima, which at some places was so thickened as almost to cause obliteration of the vessels. There was chronic indurative neuritis in this case, which was the result either of inflamed bronchial glands or of inflammation derived from nutrient blood-vessels.

Dr. Cohen.—Dr. Osler informs me that the small vessels of the recurrents exhibit slight hyaline degeneration; not more than was to be expected, and not sufficient to be of importance. The larger vessels were not examined.

A NEW TRAPPING-FIXTURE
FOR
SEALING DRAIN-PIPES AND LOCKING OUT SEWER GASES.

By W. D. SCHUYLER, M. D.

(*Concluded from page 67.*)

Many plans for obviating the effects of sewer gas by affording better ventilation of rooms and fixtures have been devised and adopted. One is, as we have seen, to reduce the number of fixtures. While lessening the number of water fixtures so far diminishes the necessity for drain-pipe connections between the house and the sewer, and to that extent excludes sewer gas, yet, so long as a single fixture requiring such connections remains, such precaution is imperfect and therefore insufficient. Its imperfection and the inconvenience entailed by an absence of fixtures are against it; and, as it further operates unfavorably in not providing for the necessary use, and therefore volume, of waste water required to effect thorough sewerage, it will not answer. Besides, so long as a single fixture requiring a drain-pipe connection remains, sufficient malaria may escape through it to work serious injury; and, when a specific contagium pervades the sewer atmosphere, the morbid results that can be propagated through such a single fixture might equal what could occur through a much greater number. This plan, therefore, short of abolishing fixtures entirely, will not prove a sufficient remedy.

Another plan, adopted by some, is styled the annex. It comprises the erection of a separate structure in the rear of the main building for the accommodation of all water fixtures, in which escaping gases may be shut out from the house proper. The inconvenience made necessary by the remote and exposed locality of fixtures so removed, and the harm that might result to delicate individuals from enforced visits to them in inclement weather, and, furthermore, the practical impossibility of placing and using all fixtures required—tubs, sinks, etc.—in such buildings, unless of greater dimensions than is generally contemplated, will operate against its adoption. Besides, it is further imperfect by reason of the fact that in the frequent necessary use of and visits to such structure it would be simply impossible to prevent the escape and diffusion of its tainted atmosphere into the house proper, and consequent resulting harm. Furthermore, the plan involves such additional expense and space for building as virtually to defeat its practical application.

A third plan comprises the construction of all water fixtures about a central ventilating shaft—the theory of such construction being that, convenient ventilation being afforded, gases will pass by it at once into the open air. This plan evidently has found much favor with architects, as many apartment and tenement houses have been constructed to embody it; and, while it seems to afford a satisfactory solution of the matter, yet a more critical examination of its merits, as such depend upon draughts, reveals its incompetency. Ventilation is dependent upon draughts, and draughts in turn depend on relative temperatures of the atmosphere to be ventilated and the outside air. The house temperature, especially in winter, is kept many degrees higher than the outside atmosphere, and, as a consequence, draughts set from the latter into the former, and ventilation, accordingly, is from the outer air down through the air-shaft where the fixtures are located, and thence into the house, carrying the foul air with it rather than the reverse. The tendency of the warmer air of the house to influence currents into it, especially in the higher apartment houses where there is a central open space for the stairs and elevator shafts which favor strong upward interior currents of heated air in the central portion of the buildings, is so considerable as to induce strong draughts into it from every quarter, and even to cause downward currents through chimney-flues whose upper opening is a hundred or more feet above, unless fires are kept in the grates at their lower end to determine them upward.

In an apartment house in which I lived for some years the downward draughts from the cause mentioned were so considerable that, to prevent the entrance of cold air and of smoke from adjoining flues, I was compelled to have those chimneys I did not use hermetically closed up. This example illustrates powerfully the controlling influence of varying temperatures over draughts and ventilation. The impossibility of overcoming the stronger tendency to inward draughts through ventilating shafts, therefore, renders them futile, especially in winter, when the results desired are most needed.

The newly adopted ventilating pipe for soil-pipes and for affording back-air ventilation for traps—the former extending from the cellar to and through the roof, and the latter extending from the sewer side of the trap also to and through the roof—to conduct gases arising in drain-pipes, soil-pipes, and sewers outward—comprises a ventilating plan which, applied in connection with the commonly used S-trap, is regarded by some as an entire settlement of the sewer-gas question.

As a plan it is imperfect on account of the causes and conditions controlling draughts alluded to, and in very cold weather, particularly when the house temperature is kept correspondingly high and all other sources of inward ventilation are purposely kept closed, these pipes will afford a means of downward ventilation rather than the reverse, and thereby necessarily fail of accomplishing their object. Again, no system of pipe ventilation can make up for the defects of the S-trap, or, more especially, can prevent the total disappearance of its water seal by evaporation. On the contrary, as I am informed, the "back-air pipe" favors such evaporation, and thus the removal of the only bar offered by the S-trap to prevent a free current of the sewer air setting upward into the house. Furthermore, the result of providing such general means of conducting sewer gases into the atmosphere surrounding our homes seems of most questionable utility, and in time, if generally adopted, it must prove a cause of great harm. Ventilating sewers by numerous pipes out of and over isolated dwellings, or from the tops of houses, in sparsely populated regions, may not prove very harmful; but such a procedure in cities, where the atmosphere is already vitiated by innumerable causes, must certainly, sooner or later, prove highly detrimental.

The question of providing ventilation for the sewers *per se* need not here be discussed, but suffice it to say the correct treatment of gases in sewers is preventive, namely, by such proper construction of these canals that they can be flushed successfully, and then by regular and systematic flushing. By this means all organic matters could be washed away as soon as they were deposited, when nothing would remain from which gas could arise. At least, providing for the escape and diffusion of sewer gases all over the city by the erection of myriads of ventilating pipes, such ventilation being practically tantamount to leaving sewer drains uncovered, should not be tolerated.

Although built on an island topographically and geologically formed and environed to constitute one of the most healthful places in the world, yet many people can not reside in this city even now without in various ways and varying degrees suffering from ill health. And, inasmuch as such ill health is recovered from when they retire only a short distance into the country, and recurs when they return, it is fair to assume that its occurrence here is from breathing the vitiated atmosphere by which we are surrounded. Therefore, to adopt or permit of a general construction of fixtures that will render the city atmosphere less healthful would be worse than folly. Hence such sewer ventilation over our houses should not only not be tolerated, but should be prohibited.

Lastly, the plan has been brought forward of destroying the poisonous elements of sewer gases by disinfectants. It includes the discharge of some germicide into the drain-pipes and soil-pipes with and immediately following the use of each water fixture. This procedure, in connection with fixtures that are frequently used, and so far as it is faithfully carried out, though involving no slight expense and trouble, may prove of value. Inasmuch, however, as its action is dependent upon its application, and the latter is wholly dependent upon the use and operation of water fixtures, and it is wholly inoperative in unused fixtures, where it is relatively most required, therefore, as a radical means of protection from the evils of sewer gas, it is seen at a glance to be most incompetent.

Thus, on even a cursory examination of the various expedients proposed for diluting sewer gases or for lessening or destroying their potency to work harm, we find them all incompetent for the purpose required. Hence, inasmuch as gases can not be successfully and safely disposed of by these various expedients, it may be a rational and accepted inference that the only reliable plan of treating them is *to shut them out by such trapping as will reliably and surely accomplish that result.*

The problem of efficient and reliable trapping comprises such control of the lumen of drain- and soil-pipes that, while they *may never be obstructed* but open to permit of necessary drainage downward, *they shall always be effectually closed* against the escape of returning gases upward.

To accomplish this double and reverse purpose (judging from the study and practical attention it has received, and so far without practical results) would seem not to have been an easy task. The device at present most employed for this purpose is what is known as the S-trap. The theory upon which this device rests is, that water absorbs and obstructs the passage of gases, and therefore is an adequate trapping body.

The S-trap consists of a short segment of drain-piping bent upon itself or pressed into the form of a goose-neck or S, the object of the bend being to provide a relatively lower section of pipe that is immediately succeeded by a higher section, which, therefore, with each discharge of water passing through it, will retain sufficient to close the lumen of the drain-pipe at that point, which retained water constitutes the trap seal. While a water seal is held to prevent the upward escape of gases, it is, on the other hand, no obstruction to downward drainage; hence the device has long been held to be all that was desired, and is generally adopted.

Its theoretical competency, combined with its simplicity and cheapness, has heretofore rendered this a very popular form of trap, and, were it reliable under various circumstances to which it is subject, no other device would be required. However, notwithstanding its general adoption, and especially in view of the growing and general distrust with regard to its action noticed, we may well ask whether it does constitute a reliable safeguard against the entrance of sewer gases? Testimony already adduced implies that it does not. And the well-known *unsubstantial* character of its water seal in itself should afford abundant *a priori* evidence confirming such implication. But let us examine more carefully as to its capacity for reliable and durable action. As stated, the seal of this trap is simply water, and of that a comparatively small amount.

(1) This water seal is liable to be evaporated out. Evaporation of this seal goes on at all times, but varies in rapidity with varying conditions of atmospheric pressure and humidity, and of the wind. In the warm and dry atmosphere of summer, and when dry winds prevail, evaporation rapidly progresses; and when this trap is, as now, supplied with the back-air ventilating-pipe, that also furnishes the sewer surface of its seal with dry air, the process of evaporation is doubly hastened. However, the fact that such a seal is being continually depleted by evaporation indicates that, in unused fixtures at least, where its renewal can not take place, it is only a matter of time when it must disappear, and the trap become inoperative from that cause.

(2) This seal is subject, owing to its position in the downward course of the drain-pipe, to removal by suction. This process, known as siphoning, is of common occurrence, and in some traps it results with almost every discharge of water passing through the pipe below. It is held by some who advocate the sufficiency of this trap that it will not siphon out when properly connected—namely, when the drain-pipe below is sufficiently large. Be that as it may, such a result does occur, and it constitutes one of the valid objections to the trap. Whenever, from either of these causes—evaporation or siphoning—the water seal of this trap is removed, then there remains no obstruction whatever in the trap or in the drain-pipe to bar a free escape of sewer gases, or of gases generated in the drain- or soil-pipes within the house, upward into the house atmosphere.

(3) The seal of this trap may be impaired by displacement. Any substance too heavy to be floated out with the discharging water, that may chance to fall through the outlet of the basin or other receptacle beneath which the trap may be placed, may lodge in and soon fill the water space, which thereafter is incompetent to retain sufficient water to constitute a trap seal.

(4) This water seal may also become inoperative from saturation. While water possesses the property of absorbing gases, its capacity to do so is limited, and when this limit is reached then it no longer presents a bar to the up-

ward escape of gases, for they are given off from the upper surface of such saturated seal as rapidly as they can be taken up by its lower surface. Especially will this result occur when pressure is acting from below, and the higher temperature of the house atmosphere also induces suction upon its upper surface.

(5) This seal is totally inadequate to resist the escape of gases when they are driven upward by pressure. While, as stated, the ordinary pressure of a sewer atmosphere must be slight, yet, when in addition the elevated house temperature induces strong suction upward, the combined action may have sufficient force to overcome the slight resistance a few inches of trap water can interpose, and this is more especially likely to occur when the body of trap water has previously been impaired by either or by all the influences mentioned.

Considering, then, the various probable or certain defects that this trap is subject to by reason of the instability of its water seal, and that two of them—siphoning and pressure—may destroy it at once, while evaporation is certain to do so in time, two deductions with regard to its action are unavoidable:

First, that *it is assuredly reliable only while its seal is being continually renewed* by water passing through it—namely, while the fixture beneath which it is placed is being actively used. And, second, that the longer its water seal *remains unrenewed*, the longer the fixture beneath which it is placed *is left unused, the less reliable the trap becomes, and the more certain it is to be rendered totally defective.*

In unoccupied houses, then, whether they are new and have not been occupied, or have been left for the summer, or in connection with fixtures that are seldom used—as in spare rooms, guest chambers, or in rooms on upper floors—this trap is probably defective, if not wholly inoperative, most of the time. A practical difficulty met with in regard to the reliability of this S-trap is, that its defectiveness can not be readily determined. As we have seen, it may become inoperative at any time; and yet the position of the trap and the opaque material of which it is made render it quite impossible to determine with certainty as to the fact. Although gases may be escaping into our rooms on account of such defects, and the atmosphere we are breathing become polluted by them, we may not, for the reasons given, be made aware of the fact. If the sense of smell were competent to sound an alarm when an invasion of gases was occurring, a remedy might be applied in time to prevent harm; but, either because some gases are odorless, or because the sense of smell becomes too easily tolerant, danger may not be perceived before harm has been accomplished. However, notwithstanding the natural and irremediable defects of this trap, it is being daily put in, and thousands blindly rely upon its action; and some contend, without looking farther, that they would have no other fixture, particularly if it is supplied with a back-air ventilating-pipe. Inasmuch as an attached ventilating-pipe can not wholly remedy its defects, can not prevent, but, on the other hand, does favor, its insufficiency by evaporation, and can not prevent its becoming inoperative from displacement, *it is difficult to understand what valid assurance* is secured by such combination. The facts remain that, however it may be supplemented by ventilation, the S-trap is subject to defects which may develop at any moment, and that, as a main protection against sewer gas arising through drain-pipes, and particularly when in connection with fixtures seldom used, *it is most incompetent and deceptively dangerous.* The defects of this trap are common to all traps that act by water or other fluid seal, as also to all traps that act by a more substantial seal, ball, plug, or other, that depends for its action on the presence of water or other liquid.

Hence, in general, it may be positively accepted that a liquid seal is an unreliable and incompetent trapping body, and, correspondingly, it may be inferred that only a trap providing an efficiently operated metallic seal is competent, and can be accepted as durable and reliable.

(*To be concluded.*)

ANALYSIS OF ONE HUNDRED AND THREE CASES OF EXUDATIVE NEURO-RETINITIS ASSOCIATED WITH CHRONIC BRIGHT'S DISEASE.*

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In presenting to the consideration of the society some points in the course, duration, and prognosis of so-called neuro-retinitis albuminurica, which have seemed to the writer to be of some interest, it should be stated that only such cases have been considered as were originally examined by the writer himself, and which he had been able to follow to their termination. All cases of renal disease with retinal complications which were due to scarlatina or pregnancy were rigidly excluded. Out of a total number of somewhat more than five hundred cases examined, I have been able to follow, up to the present time, only one hundred and three cases, or about one fifth of the whole number, the remaining four fifths, or about 80 per cent., having disappeared from view. The observation of these one hundred and three cases covers a period of time of thirteen years and six months. In every case the ophthalmoscopic examination was made by myself, while the visual acuity and visual field were measured by competent assistants. The urine of each patient was examined both chemically and microscopically by myself. Where it was possible to do so, the entire amount of urine passed in the twenty-four hours was tested as to reaction, specific gravity, color, amount of albumin and sugar, and the presence of casts, and the results were carefully tabulated. The heart was carefully examined in every case, and where one examination was not perfectly satisfactory a second was always made.

The period of duration of the retinal inflammation, as indicated by the symptoms complained of by the patients, varied in the one hundred and three cases between three days and three years, but in many cases of considerable chronicity the patients were unable to set any exact period for the beginning of the failure of vision. In the large majority of cases both eyes were affected when the patient first came under observation, though by no means always in the same degree, there being in many cases a marked difference in the two eyes.

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* Read before the American Ophthalmological Society, July 21, 1886.

The period of duration of the renal disease, as indicated by the occurrence of the symptoms, was very difficult to determine. In fifty-six cases, or more than 50 per cent., it was entirely unknown. In forty-seven cases, or somewhat less than 50 per cent., it varied from six months to several years. The sex of the patients was nearly evenly divided between males and females, fifty-six being men and forty-seven being women.

The age of the patients varied between five years and seventy-eight years.

The vision ranged from $\frac{20}{20}$ to zero. It was improved by constitutional and local means in thirty-two cases, or about 31·5 per cent., but this was mainly due to an improvement in the renal disease and in the general health, and was not permanent, for, as the disease in the kidneys reasserted itself and the general health failed, fresh exudation, or hæmorrhages, or both, occurred in the retina, and vision again deteriorated.

Uræmic amblyopia or transient attacks of more or less complete blindness in one or both eyes occurred in thirty-seven cases, but in all of these cases retinitis or neuro-retinitis was present.

Both eyes were affected at the time of examination in fifty-four cases, and both eyes became affected while the patients were under observation in ninety-three cases. The *right* eye was first affected in twenty-seven cases, and the *left* eye was first affected in twenty-two cases. The retina alone was inflamed in both eyes in eighty cases. In the *right* eye alone the retina was inflamed in eleven cases, and in the *left* eye alone in twelve cases.

The optic nerve *and* retina were inflamed in both eyes in about 25 per cent. of the cases. They were both inflamed in the *right* eye alone in sixteen cases, and in the *left* eye alone in thirteen cases.

Hæmorrhages occurred in both eyes in forty-six cases. They occurred in the *right* eye alone in eleven cases, and in the *left* eye alone in twelve cases. In thirty-four cases there were no hæmorrhages. In thirty of these thirty-four cases there was hypertrophy of the left side of the heart, while among the sixty-nine cases in which hæmorrhages occurred there were five in which there was no cardiac disease demonstrable.

Hypertrophy of the *left* side of the heart, *without* valvular disease, occurred in seventy-nine cases. There was hypertrophy of the left side of the heart *with* valvular disease in sixteen cases. In eight cases there was no cardiac disease at the time of the first examination, though hypertrophy of the left side subsequently developed in all but three cases.

In many of the cases examined there were visible in the retina the white lines along the arteries, which constitute the so-called vascular hypertrophy, so well described by all writers on this subject. But in many of the cases, even those in which the heart was hypertrophied, no such change was to be seen in the retinal arteries as we are accustomed to designate by the name of perivasculitis retinæ.

I have not been so fortunate as to examine any case early enough in the course of the retinal disease to see it in what Leber calls its first stage, or that of marked retinal and papillary hyperæmia, accompanied by an œdematous infiltration; though I have seen the œdema in what Leber would call the second stage, accompanied by the yellowish fatty degeneration. Here it is certainly due to increased vascular tension, for it varied with the state of the circulation, and was susceptible of recovery. In this second stage I have seen the margin of the papilla alone infiltrated, with the center not involved, and with more or less space between the infiltrated papillary margin and the yellowish exudation in the region of the macula. In a few cases I have seen a pure papillitis, resembling the "choked disc" met with in intra-cranial tumor, without any exudation into the retina, but, if such cases are kept under observation long enough, the retinal exudation in and about the macula will be sure to occur, though not necessarily in the stellate form supposed to be typical of the disease. The yellowish exudation regarded as marking the second stage I believe to be entirely independent of the occurrence of hæmorrhages, having no connection with either their number or size. This exudation, which marks the fatty change dependent on arterial degeneration, is now generally regarded as an index of chronicity in the renal disease, and by some as the issue, direct or indirect, of the increased arterial tension which loss of renal function in many shapes may entail. This latter point, however, is by no means generally accepted. This change seldom occurs independently of renal fibrosis, and scarcely ever without being preceded by hypertrophy of the left side of the heart. It seems now to be a view generally accepted by pathologists that the cardiac hypertrophy is not caused by the arterial thickening, but results in common with it from the capillary obstruction; for this idea seems to be proved by the frequent development of cardiac hypertrophy before corresponding changes are noticed in the arteries, and also by the general absence of cardiac changes in lardaceous disease, where the arteries, though not affected in the same way, are as much thickened and apparently as obstructed as in other forms of albuminuria. But, though these vascular changes occur so constantly in the kidneys and some other organs of the body, they are by no means always met with in the retina. Though the ophthalmoscopic picture of white lines along the retinal arteries was very often seen in these cases of exudative neuro-retinitis, there were many of them which showed no such visible proof of the hypertrophy of the muscular and fibrous coats, and a consequent diminution of the vascular caliber. In these cases, if the vascular coats were thickened, the hypertrophy was not extensive enough to admit of being seen by the enlargement produced by the ophthalmoscopic image, and, however constantly this vascular change in other parts of the body may be associated with hypertrophy of the left ventricle, it is not so with the retinal vessels.

As regards the retinal hæmorrhages, it is no doubt true that their occurrence is intimately connected with a diseased condition of the blood-vessels. They almost always occur suddenly and are apt to affect both eyes, though not necessarily simultaneously, and by no means commonly symmetrically. Cases have been reported in which they caused extensive scotomata, but I have met with but three such cases. In one case, where the left eye was first affected, there was a arge hæmorrhage at the macula which extended well over toward the margin of the optic disc, and here an examination of the field showed an irregular central scotoma of an average diameter of 20°. In another case, also of the left eye, there was a small central scotoma corresponding to a hæmorrhage which covered the entire macula. In a third case, in which both eyes were affected, there was a large hæmorrhage in the region of the macula in both eyes, with a corresponding irregular central scotoma in the field of each eye.

A single instance of colored vision occurred among the whole number of cases. The patient, a woman, who had suffered from Bright's disease for three years, who had both hypertrophy and valvular disease of the heart, and in whom both eyes showed the typical form of neuro-retinitis albuminurica, complained constantly of erythropsia, and said that everything appeared as if seen through red smoke. In this case there were no retinal hæmorrhages.

The third stage of the retinal process, as described by Leber, or that of retrograde metamorphosis of the retinal exudation, is worthy of close and continued observation. In the thirty-two cases in which the vision improved for a time while the patient was under constitutional treatment, there was in all a perceptible change in the appearance of the fundus, which in some cases was very marked. There was in all a complete disappearance of the œdematous infiltration of the retina and disc, and in some a perceptible absorption of the yellow exudation in the retina around the macula and between it and the optic disc. But I have never in any case seen any sign of absorption in the peculiar glistening stellate exudation at the macula, even in those cases in which the improvement of vision was most marked. Leber refers particularly to the absorption of the exudation which takes place in those cases of renal disease which are cured, or which are brought to a standstill; but I very much doubt whether any case of chronic interstitial nephritis which has lasted long enough to cause cardiac hypertrophy and neuro-retinitis is ever cured. I do not remember ever to have seen a case in which the retinal exudation was entirely reabsorbed. The retrograde metamorphosis I believe to be always an incomplete process, and, though the exudative process may remain for a time quiescent, I think that in the great majority of cases, if not in all, this state of partial metamorphosis is always followed by a recurrence of the inflammatory process in the retina and fresh exudation, dependent indirectly on an exacerbation of the renal disease, through the medium of fresh cardio-vascular changes. In the more unfavorable cases, where both retinitis and neuritis have been marked, another and still more unfavorable change occurs. As the immediate inflammatory symptoms subside, and the œdema of the optic disc and retina disappears, the papilla regains more or less completely its regularly defined outline, and in some cases even may become as sharply defined as normal, but, instead of retaining the grayish- or whitish-yellow hue of inflammation, or of regaining the rosy-gray hue of health, it becomes discolored, grows more and more white, and finally assumes the appearance of atrophy following a neuritis descendens. The arteries become diminished in caliber and begin to show white lines along their walls, and these changes become more and more marked as time elapses, and we have then to deal with a hopelessly atrophic papilla.

An examination of these one hundred and three cases, with special reference to the duration of life, has impressed me very strongly with the extremely unfavorable prognosis to be made, and with the comparatively short lease of life which these patients still possess. Of the one hundred and three patients examined, extending over a period of thirteen years and six months, eighty-six have died and seventeen are still living. Of the eighty-six who have died, fifty-seven died within the first year; eighteen within the second year; six within the third year; four within the fourth year; and one within the sixth year. Of the fifty-seven who died within the first year, thirty died within six months. One died within ten days of the first examination; one in three weeks; eight within two months; six within three months; seven within four months; three within five months; four within six months; three within seven months; six within eight months; four within nine months; three within ten months; one within eleven months; ten within twelve months; two within fourteen months; one within fifteen months; one within sixteen months; three within eighteen months; one within twenty months; ten within twenty-four months; six within three years; four within the fourth year; and one within the sixth year.

Of the seventeen patients who are still living, fourteen were seen for the first time within the last six months, and in all but one of these fourteen the renal disease had probably lasted a considerable time. Two of those still living were first seen within the past year, and one of the seventeen was first seen seven years ago and has been examined at intervals since. In this last case the stellate exudation at the macula still continues unchanged, but, although there has been but little change of vision for several years, the renal disease is still present, as shown by the urine and certain head symptoms.

It will thus be seen that, of the one hundred and three patients examined, fifty-seven, or more than 50 per cent., died within the first year, and thirty of these died within the first six months, a fatality which is not only marked, but for a chronic disease unusually rapid.

A rather unusual complication was observed in four cases in the presence of sugar as well as albumin in the urine. In one of these cases both eyes were affected, the right eye much more than the left eye, and there was cardiac hypertrophy. The amount of sugar varied with every examination that was made of the urine and was never large. The patient died in eight months. The second case, in which both eyes were affected, showed also a varying amount of sugar, as well as albumin and casts. This patient also died in eight months. In both these cases there were retinal hæmorrhages. The third case, in which both eyes were affected, showed considerable sugar from the beginning, but it disappeared from the urine before the death of the patient, which occurred in fourteen months. The fourth case, in which both eyes were affected, showed a small amount of sugar at first, which has varied in quantity at different times. This patient is still living. There were no retinal hæmorrhages in either of these last two cases.

BORIC-ACID POWDER IN THE TREATMENT OF GRANULAR LIDS.

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I was first led to the use of boric-acid powder in the treatment of granular lids by the beneficial effect produced by this agent upon tissues somewhat resembling the conjunctiva in this disease. I had seen granulation-tissue in the ear, and on ulcers on other parts of the body, shrink and disappear under the use of this agent, and in the nasal cavities the thickened and swollen mucous membrane, almost blocking these passages, was often thinned down under the continued use of boric acid. My first publication upon the subject appeared in the "Virginia Medical Monthly" of February, 1882, and since that time the method of treatment there described has been carried out by myself and others with such success as is shown below. A few points as to the details of its use may not be inappropriate.

1. *Method of applying the Powder.*—The lids being thoroughly everted, the pulverized acid is freely dusted over the exposed conjunctiva with a camel's-hair brush. The amount will, of course, vary, but in most cases of granular lids a quantity should be introduced sufficient to cover completely the parts to which it is applied. The frequency of application will vary from three times a day to three times a week—this difference depending upon both the individual and the disease. It will be safe to repeat the application as soon as the disagreeable symptoms which have been relieved by the remedy begin to appear again.

2. *Effects produced by the Powder.*—Its immediate effect is to produce a burning, gritty sensation, with some pain, lasting for five or thirty minutes, and a free serous discharge, after which relief is experienced, and the lids feel freer, lighter, and smoother than before its use. This beneficial effect lasts for a period varying from a few hours to several days. The conjunctiva at times shows reduction in swelling and thickening as soon as the irritation following its use has passed off. This is, however, more noticeable after the remedy has been used for a week or more, when perceptible thinning of the conjunctiva is observed, and clearing up of the cornea if pannus be present. When boric-acid powder is applied to succulent tissue or a swollen mucous membrane, a free serous discharge quickly appears, which lasts for ten or twenty minutes. This discharge occurs largely at the expense of the volume of the tissue to which it is applied, and is followed by a shrinkage of the same. This is best illustrated in the nasal cavities, when they are closed or nearly so from swelling of the mucous membrane. A short time after the use of the acid the passages become clearer and freer, and this is noticeable to the examiner as well as to the patient. This serous flux is probably of an osmotic character. Its escape relieves succulent tissue of its superabundance of serum, thereby causing contraction, which facilitates a healthier circulation and better nutrition. Its action as an irritant is in the same direction, and is especially instrumental in the cure of corneal affections. The power possessed by boric acid of restraining micrococcal development, of diminishing diapedesis, of lessening the amœboid movement of leucocytes, and other tissue and chemical changes which it produces, are factors which enter into the theory of its action. When the powder is applied to a granular conjunctiva, it not only covers the entire membrane, but enters the cracks and crevices between the granulations, and brings about the changes indicated upon the conjunctiva as a whole and upon the granulations individually.

3. *Cases suitable for and Facts governing its Use.*—I have used boric-acid powder in all forms of granular lids, and in most varieties of conjunctivitis, with benefit. I think, however, that the papillary form of granular lids is most amenable to its influence. Pannus in every instance has been markedly improved, and in many cases cures have been effected. In ophthalmia neonatorum some cases have received benefit, but I rely but little upon the powder in purulent cases. On the contrary, it acts best when the secretion is scanty and serous. I have often noticed that the conjunctiva became less tolerant of its action after the powder had been used for three or four weeks, and in such cases the treatment has been changed with success. Boric acid in this particular is similar to other agents in general use for the treatment of granular lids, for it is often noticed that a remedy will *wear itself out*, as it were, and it becomes necessary to substitute another agent for the one which has been used. Boric acid is only one of these remedies, and is no more of a specific than others, yet it is an important addition to our list of efficient remedies for a disease which is often rebellious and always obstinate and protracted. It is less painful than other remedies, its effects in this particular being often recognized by the patient, who will ask to have the powder repeated, because it is less painful and more efficient in affording relief than other agents which have been employed. Jequirity has done much toward simplifying and hastening the treatment of granular lids, but there will always remain a large contingent in which the special condition or the general surroundings of the patient will debar its use, and in such cases as these we must resort to those remedies that are known to be of value—possibly less brilliant, but entirely free from danger.

Case I.—A. B., a boy sixteen years old, who had granular lids in each eye, came to the New York Eye and Ear Infirmary in October, 1882, and was placed upon the usual treatment of sulphate of copper, with occasional alternating applications of alum crystal and nitrate-of-silver solution. This line of treatment was continued for one month with but little effect, when I began the use of boric-acid powder, applying it freely to the everted lids, three times a week, until three applications had been made, when I had the patient return for daily treatment. After this had been continued for two weeks, I found the granulations much reduced, and, instructing the lad's mother how to use the powder, I furnished her a supply, and directed her to use it every other day, and to bring the boy to me again in two weeks. He was allowed to begin his work again, as salesman in a grocery store, where a moderate amount of writing was required, his eyes having been before this time too bad to admit of their use. When seen at the next visit, the granulations had disappeared, and the conjunctiva was nearly the color of health.

Case II.—A. S., school-boy, fourteen years old, with granular lids of some months' standing, came to the Infirmary in December, 1882, and was placed upon the daily application of boric-acid powder. In two weeks he was very much better, and the powder was given, to be used at home every other day. He was seen again in a month, when the granulations had nearly disappeared. He was now allowed to return to school, and was told to use the powder twice a week, and to return in a month. He was not seen again.

Case III.—An office boy, sixteen years old, came to the Infirmary in February, 1883, with granular lids of several months' standing. The palpebral conjunctiva was much thickened, especially about the *cul-de-sac*, where it appeared in prominent folds when the lids were everted. The cornea was a little hazy throughout its upper half, and some blood-vessels had made their appearance in this locality. He was placed upon the boric-acid treatment, receiving the applications at the Infirmary, three times a week, and continuing at his work meantime. Noticeable improvement appeared in two weeks; he was given the powder to use at home, and was told to report once every two weeks. At the next visit the lids were much better, and the conjunctiva was markedly thinner throughout. The vessels had disappeared from the cornea, and the haziness could be detected only with oblique illumination. At the next visit thickening of the conjunctiva was noticed at the *cul-de-sac* only; the corneæ were clear, and the eyes could be used without discomfort.

Case IV.—L. O'C., female, twenty-six years old, applied at the New York Eye and Ear Infirmary in March, 1883. She had granular lids and pannus in each eye of two years' standing, with much thickening of the conjunctiva; there were also photophobia and lachrymation. Vision, right $\frac{10}{200}$, left $\frac{20}{200}$. Boric acid was used three times a week at the Infirmary, and on alternate days a sister made the application at home. A week later, improvement was noticeable. Treatment was continued for two weeks longer, and the frequency of the applications was diminished to three times a week. Vision $\frac{20}{50}$ in each eye. Two weeks after, vision was $\frac{20}{40}$ in each eye. Pannus absent. Thickening of the conjunctiva only at the upper *cul-de-sac*.

Case V.—I. D., boy, seventeen years old, had granular lids and pannus of eighteen months' duration. He was seen at the Infirmary in April 1883. The conjunctiva was thickened. Photophobia and lachrymation were very annoying. He had to be led around. Boric acid was ordered to be applied twice a day, at home. One week after he was much better. The vessels on the cornea were fewer. Photophobia was absent. Lachrymation was less. The conjunctiva was noticeably thinner. Applications were reduced to once daily. Two weeks later the applications were reduced to three times a week. One month later he was nearly well; the pannus had gone, there was but little thickening of the conjunctiva, and this was limited to the fornix; slight haziness of the cornea. Vision $\frac{20}{50}$ in each eye. He returned to school again.

Case VI.—Dr. W. T. A., a patient treated by Dr. H. D. Noyes during the winter of 1883, for obstinate granular lids and pannus, was ultimately placed upon the use of boric-acid powder, which benefited him considerably, and he states his experience as follows: "Boric-acid powder is the first agent used which has had a decided and permanently beneficial effect upon my eyes. The application is not painful. The irritation caused by its use lasts for ten or twenty minutes, after which the eyes feel much better and clearer. The effect of the acid was more noticeable at first than now. The lids have been much thinned down under its influence." The doctor had received all of the various methods of treatment before getting the acid, and his testimony is valuable.

Case VII.—N. W., seventeen years old, came under treatment February 27, 1886. His eyes had been sore for six months with granular lids. Treated for nine weeks with pulverized boric-acid powder. Cured. (New York Eye and Ear Infirmary.)

Case VIII.—R. R., eighteen years old, came under treatment January 16, 1884. Eyes had been sore for one year with trachoma and pannus. Boric-acid powder was used; cured of both pannus and granular lids, May 9, 1884. (New York Eye and Ear Infirmary.)

Case IX (Dr. D. C. Cock's).—K. H., sixteen years old, had granular lids of both eyes. Right eye, cornea opaque; vascular keratitis; vision = perception of light. Left eye, corneo-scleral staphyloma; boric-acid powder. Four weeks later, vision, right eye, $\frac{4}{200}$; marked disappearance of granulation tissue; lids smooth and much more comfortable. Photophobia entirely relieved. (It was distressing before the treatment was begun.)

Notes of the following five cases were furnished by Dr. L P. Walker, house surgeon of the New York Eye and Ear Infirmary. They were treated in the institution and occurred in the service of several of the surgeons, who kindly consented to their publication.

Case I (service of Dr. R. H. Derby).—Old trachoma and pannus, with marked ptosis from accumulation of tissue; under treatment for over a year; nitrate of silver, sulphate of copper, alum, and mitigated stick were used. There was some improvement under each, as the new remedy was tried, but the eyes always returned to the same condition in a little while. After the use of boric-acid powder for ten days, marked improvement commenced, the vessels began to disappear from the cornea, photophobia became less, and the lids began to thin in a marked degree. Boric acid was discontinued, and resort to copper has resulted in almost a complete cure, except of the ptosis, which still remains.

Case II.—Granular lids of long standing; under treatment for two weeks, with copper and alum, and did not show very great improvement. Boric-acid powder was dusted freely in the lids, and at the end of five days a good deal of improvement was noted, when the case passed from observation. The improvement was attributed to boric acid. (Service of Dr. P. A. Callan.)

Case III (service of Dr. H. D. Noyes).—Granular lids and pannus. In the house for nearly eighteen months. Silver, copper, alum, mitigated stick, tannin and glycerin, and iodoform, were all tried. Temporary improvement occurred under each, but the patient was subject to constant relapses. In six weeks, under boric acid, the photophobia nearly disappeared, the pannus was clearing rapidly, the lid-tissue was thinning, and assuming a healthy condition. The patient was able to face the light and the vessels had entirely gone from the cornea. The patient left the hospital able to read, and with little or no haziness of the cornea or dread of light. Cure would probably have been complete had she remained in the institution.

Case IV (service of Dr. J. L. Minor).—Granular lids of long standing. Nitrate of silver, copper, alum, tannin and glycerin, and scarifying the lids, were all tried with little or no improvement. The patient was put on boric-acid treatment for two weeks; the photophobia fast disappeared, the pannus cleared up, the surface of the lid was smooth, and the patient was able to face a moderately bright light. Before boric acid was used the head was kept buried on the chest, and a shade was constantly worn.

Case V (Dr. Walker's service).—Granular lids. Put on boric-acid treatment for a week and greatly improved, when the patient was well enough to leave the house, and did not return again.

BRIGHT'S DISEASE OF THE KIDNEYS

SUCCESSFULLY TREATED

WITH CHLORIDE OF SODIUM.

By ALLARD MEMMINGER, M. D.,

PROFESSOR OF CHEMISTRY AND HYGIENE IN THE MEDICAL COLLEGE OF THE STATE OF SOUTH CAROLINA, CHARLESTON.

I do not in this paper propose entering upon the ætiology of Bright's disease of the kidneys other than to the extent which is necessary in explaining my theory as to the probable and rational action of the chloride of sodium in this disease.

The subject of Bright's disease has to me a special interest, and that no doubt from the fact that much of our knowledge in regard to it is alone attainable in the chemical laboratory.

For some time past I have endeavored to reconcile to my mind the various views held by distinguished teachers in this country and in Europe as to the real cause of albuminuria. In following them, however, I have found myself pretty much in the position of the Indian who, when told that the world stood on the back of the tortoise, adroitly replied, "Upon what, then, does the tortoise stand?"

This, indeed, appears to me to be the legitimate consequence of following too closely those teachers, and among them that distinguished clinical teacher and author, Professor Alfred L. Loomis, of New York, who, when speaking of the morbid anatomy of chronic parenchymatous nephritis, says: "It is almost always the legitimate consequence of depraved cell development, and it may make its appearance in any form of renal lesion in which there is protracted interference with the normal nutrition of the tubes."

Although this, of course, is true, we with great deference would go a step farther and incline to the views of Graves and Prout, who explain this depraved cell development by the assumption that it is due in the first instance not to an alteration in the structure of the organs that secrete the urine, but rather to the abnormal composition of the blood, or else perverse action of the albuminous element of the blood serum.

It was from this standpoint, therefore, that I was induced to try experiments with the chloride of sodium, and, if I only here refer to cases which have been intrusted to my care, I trust I may be pardoned for apparent egotism, since the paucity of literature on this therapeutical agent renders statistics collected from the experience of others almost impossible.

It will not be out of place now, before entering upon my plan of treatment of chronic Bright's disease, to review the history and physiological action of the agent employed, and thereby draw attention to its probable medicinal virtues.

The economic and dietetic action of chloride of sodium has been known from the remotest antiquity. Pliny, for instance, after speaking of its wonderful influence in grazing animals, adds: "*Ergo hercule vita humanior sine sale non quit degere: adeoque necessarium elementum est, ut transierit intellectus ad voluptates quoque. Nam ita sales appellantur.*"

Dioscorides also writes that it preserves animal bodies from putrefaction and decay for ages; it is stimulating, cleansing, and resolutive, curing ulcers and swellings of the throat, tongue, and mouth, and healing a variety of cutaneous eruptions; and, finally, the Arabians extol its dietetic virtues by adding that it sharpens the appetite and promotes digestion.

If, now, we leave its history and turn to its physiological action, it will require but little attention on the part of the reader to see why it acts as a remedial agent in Bright's disease of the kidneys, considered from our standpoint—that is, a systemic rather than a special localized depraved cell development of the tubules of the kidney, of the stroma, or else of the blood-vessels of the same; that this change, however, does take place in the parts we have mentioned we do not gainsay, but that it is alone an affection of their structure we are disposed to consider debatable ground.

Chloride of sodium, when taken into the animal economy, has an immediate and a remote action; a portion of the salt may be absorbed immediately by the stomach, but again another portion unquestionably is decomposed to form another sodium salt and hydrochloric acid. The latter, a normal ingredient of the gastric juice, serves directly as a stimulant to the secretion of the glands, facilitates digestion, and excites the appetite. The superabundant acid that flows into the intestinal canal unites with the sodium of the bile, which it meets in the duodenum, forming chloride of sodium again, which in turn is dissolved in the fluids; and here now begins its chief function, which consists in the osmosis or endosmosis from the surface of the intestines into the villi and blood-vessels, from the villi into the blood, from the serum of the blood into the blood-corpuscles, and finally from the corpuscles into the tissues, and then by a process of exosmosis back again.

Thus it will be seen that it is *alone* the *salt* which renders possible the processes of development, progressive and retrograde; homogeneous albuminoid substances can alone penetrate cellular walls by the aid of crystallizable substances in solution; and, again, the metamorphosis of albumin being greatly increased by their presence, the amount of urea and carbonic-acid gas will, in like proportion, be increased.

Finally, it augments the parenchymatous fluid, renders the freer use of water necessary, slightly increases the temperature, and promotes and quickens tissue change everywhere.

Looking now from this physiological standpoint, I must confess it appears to me quite easy to explain the good effects of salt in Bright's disease of the kidneys.

It has been well said that, could we increase the albuminoids, or rather, I should add, modify their *absorption* by the blood, we should be in a position to treat this formidable disease. Have we not, then, before us, I ask, an agent which, though not directly adding albumin to the circulation, so modifies or renders possible of absorption by the blood the plastic elements of nutrition that it stays the wear and tear on the system, and by its presence so increases molecular cell activity that the albumin of the urine gradually diminishes, and gives place to less irritating and harmful products, which in turn are washed away by the increased flow of urine?

Taking this view, I was induced to test the effects of the chloride on persons unmistakably affected with Bright's disease of the kidneys. I regret to state that, so far, my cases number four only, and, though fully aware that it will not do to argue on too contracted and few premises, I am convinced of the merits of the treatment from the fact that in these cases an immediate amelioration of all the symptoms occurred.

Three of the above-mentioned cases were among those I treated at the Charleston City and Roper Hospitals during my term as visiting and attending physician of these institutions this past spring. In each of these cases there was such a marked improvement that the patients left the hospital before their "discharge." Up to the time at which I instituted the chloride-of-sodium treatment the patients were evidently on the downward grade, and their immediate response to the new treatment was, therefore, so much the more striking.

In each case I would not allow anything else to be given either in the way of tonics or stimulants; a good liberal diet was allowed, and, though this produced no effects before the chloride was given, it immediately showed after the salt had been taken for a short while. My notes show the average time at which improvement began to be about ten days.

The fourth case being in my private practice, I shall have an opportunity of seeing if I effect a permanent cure; at present, however, I have every reason to feel quite sanguine, as I see in this case much the same order of things as in my hospital cases. I have pursued the same line of treatment in that I have used the chloride, together with a liberal diet of milk, eggs, beef, chickens, etc. No tonics or stimulants of any kind have been employed, and, though both of these, together with the same liberal diet, were taken by this patient prior to his consulting me, he informs me that *then* he derived no manner of benefit from the same.

Before proceeding to my plan of treatment I will state that, while giving the chloride in the manner I will hereinafter state, three important conditions of the urine are observed:

1. Albumin decreases.
2. Urea increases.
3. The chlorides increase to a very marked extent.

Now, then, for my mode of treatment.

The patient, being brought as rapidly as possible under the influence of chloride of sodium, is kept there by gradually decreased doses. At first I order ten-grain doses of the chloride, contained in gelatin capsules, three times a day, and, if the state of the case allows, by preference one hour after or before meals. I generally reverse each day the order of giving; thus, if one day the capsules are given before meals, the next day they are prescribed after. If the patient complains of no nausea, I allow him to keep up, but at the slightest intimation of a sick stomach I order him immediately to assume the recumbent posture, and there remain for an hour or so, after which this temporary ill feeling always subsides. The second day of treatment I increase the dose to two capsules three times a day, and every other day I increase by one capsule until the patient is taking five capsules three times a day. About this time the good effects of the treatment will be apparent, not only from the improved subjective and objective symptoms of the patient, but from the improved condition of his urine. Albumin will, of course, at this period be found still in abundance, that is, if the case is at all a grave one; even here, however, if you institute a gravimetric examination, you will find a decided improvement, not so much in the absolute as in the relative decrease in albumin.

At this juncture I order the chloride to be diminished in quantity, and I have so far found that, after the system has thus been brought fully under its influence, it requires but two capsules, three times a day, to keep up the desired effect. If at this stage of the case there is any decided nausea or disinclination to take the medicine, I stop the same, and during the interval give one or two alterative pills, after which I proceed again to a resumption of the chloride. Should albumin again increase in the urine, urea and chlorides diminishing, I immediately resort to large doses, thus bringing the patient once more under the influence of the chloride, after which I again reduce.

The effects of this treatment, as I have said, are most marked. Headache, œdema, low spirits, general weakness, and anæmia give way to just a reverse order of things, and the patient, who a few days before was most gloomy and desponding, is now full of life and hope.

Thus, I must say, has it appeared to me in each of my four cases, and, if I have been led to express views that to many may appear extreme, it is because my convictions are based upon clinical observations which, up to this time, I have never had the pleasure of recording with any other form of treatment. I would, therefore, urge a thorough trial of this therapeutical agent by the profession on the following grounds:

1. It is harmless if properly administered.
2. Its effects are comparatively uniform, provided it is given for a sufficient time; that I have so far used it only in chronic cases of no long standing does not in my opinion militate against its beneficial effects, for, even should it not be found a cure for Bright's disease, may it not become an important article in our medical armamentarium; indeed, if only an ameliorator of man's sufferings and a prolonger of his life?
3. It may be employed as an adjunct to all recognized methods of treatment without detriment to the patient.

Thus, then, I ask the practitioner, teacher, and scholar, does not an array of such facts, coupled with the well-known physiological action of chloride of sodium, demand from each and every one of them a fair and honest trial in this most formidable of diseases?

Book Notices.

A Complete Pronouncing Medical Dictionary: embracing the Terminology of Medicine and the Kindred Sciences, with their Signification, Etymology, and Pronunciation. With an Appendix, comprising an Explanation of the Latin Terms and Phrases occurring in Medicine, Anatomy, Pharmacy, etc.; together with the Necessary Directions for Writing Latin Prescriptions, etc. By Joseph Thomas, M. D., LL. D., Author of the System of Pronunciation in Lippincott's "Pronouncing Gazetteer of the World," etc. On the Basis of Thomas's "Comprehensive Pronouncing Medical Dictionary." Philadelphia: J. B. Lippincott Company, 1886. Pp. 844.

A dictionary that is reasonably meritorious is always a valuable addition to literature, and Dr. Thomas's medical dictionary is certainly a work of sufficient merit to be entitled to an honorable place in the literature of the present time. Yet it has very serious faults. In the first place, it is not "complete," as is alleged in its title. A complete dictionary is an impossibility, but this one is exceedingly incomplete; in fact the vocabulary is meager. Although the volume is of imposing size, the typography, while exceedingly creditable to the publishers, is such as to materially reduce the amount of matter that ought to be got into a dictionary of this size. Some space is gained, to be sure, by the omission of a great many obsolete words, but this is a dangerous policy to pursue, for it is impossible to say of any obsolete word that it is not destined to come into common use again, and that speedily. It is not many years since Hooper's edition of Quincy's medical dictionary was published; and in that work *acne* was given only in a supplementary list of obsolete words! The writers of the present day are constantly reviving old terms; hence a dictionary, if it is not soon to become obsolete itself, can not disregard them. On the other hand, we have noticed in this work many terms that, not being medical, might better have been omitted.

Proper regard is paid to the derivation of words, and the author displays a good knowledge of Latin and Greek. There are occasional slips in this respect, and we question the wisdom of such an elaborate attempt to teach the Latin language as is made in the Appendix. We regret, too, that the author's knowledge of the classics has not led him to use his legitimate influence in favor of the correct spelling of certain words that are often misspelled.

The definitions are, of course, the most important feature of a dictionary. In Dr. Thomas's work they are for the most part concise and sufficient, but, including only the first few pages, we have found many exceptions. One term, *milk abscess*, is given without any definition, but only the direction "See Mastodynia apostematosa." *Mastodynia*, without any subheading, is simply defined as "pain occurring in the mamma, or female breast," and *apostematosus* is not given. Some words are only partially defined. For example, the ornithological meaning of *accipiter* is given, but no reference is made to the bandage of that name; *acormous* figures as a botanical term, but its meaning in teratology is not mentioned; *alum-water* is defined in a way to give the impression that it is not used in medicine, but only by "painters in water-colors"; only one of the numerous anatomical uses of *ampulla* is given; *anisate* is treated only as an adjective (and badly defined at that), the salt of that name being ignored; *conus* figures only as a botanical and zoölogical term, without the slightest allusion to its use in anatomy and in ophthalmology. Of words that are badly defined, we may mention *extra-uterine* ("a term applied to those cases of pregnancy in which the fœtus is contained in some organ outside of the uterus"), *acrotism* ("a defect of the pulse"), *actinomycosis* ("a diseased growth having a radiated appearance"), *acumination* ("an extended tapering acute point"), *adventitia* ("a term for the middle coat of the blood-vessels"), *alæ vespertilionis* (described as "situated between the uterus and the Fallopian tubes"), and *amygdalæ* ("a popular [!] name for the exterior glands of the neck and for the tonsils"). In general, it may be said that Dr. Thomas gives far better definitions of botanical and zoölogical terms than of those that are strictly medical. Under the word *pathogenesis* we find an essay by Dr. Morris Longstreth, the length of which (ten pages) looks odd compared with the brevity of the other articles. The article is valuable, but out of place.

On the whole, while we readily concede that this dictionary has considerable value, we can not admit that it deserves to be ranked with the medical dictionaries already in use.

Puerperal Convalescence and the Diseases of the Puerperal Period. By Joseph Kucher, M. D. New York: J. H. Vail & Co., 1886. Pp. 309.

This book is the outcome of faithful and painstaking work by its author in the Vienna Lying-in Hospital, and may be considered as an exponent of the practice at present pursued in that institution, also to some extent as a tribute to Semmelweiss. Dr. Kucher's enthusiasm for the Semmelweiss theory of puerperal fever has led him to make use of some expressions that might as well have been omitted—such, for example, as "F. Barker's happy-go-lucky views"—but otherwise what he has to say about puerperal fever is said earnestly and honestly and in very terse and readable terms. Thoroughly committed as he is to the doctrine of infection from without, he puts it in practice with a discretion that is in the highest degree creditable. Puerperal fever and puerperal infection have occupied a prominent position in medical thought for the past few years, and this book is an important contribution to their study.

We would not have the reader suppose, however, that Dr. Kucher has contented himself with a disquisition on these subjects alone; indeed, the volume, moderate as it is in size, treats sufficiently of the other pathological states attendant on the lying-in period. In fact, we can heartily recommend it as a hand-book—one that will both prove a good guide to the practitioner and direct the student's inquiries aright.

Urinary and Renal Derangements and Calculous Disorders. Hints on Diagnosis and Treatment. By Lionel S. Beale, M. D., Fellow of the Royal Society and the Royal College of Physicians, etc. Philadelphia: P. Blakiston, Son, & Co., 1885. Pp. vii–356.

There is no obscurity in the style of this author; he speaks out with a manly directness and force which attract one at once, and it is no wonder that his books are popular. This book is worthy of careful reading. That a man with Beale's breadth of culture should be a theorist to a certain extent, goes without saying, and yet his theorizing is ingenious, and never, at least in this book, prolix (see his ingenious theory in regard to the origin of pus-corpuscles, pp. 154 *et seq.*). Here is one man, too, whose head is not turned on the subject of bacteria, while admitting certain facts which are agreed to by most careful investigators. As a moralist he takes strong grounds against the elaboration, in disgusting detail, of descriptions of certain diseases, real and fancied, of the genital organs. It is really refreshing to find a book which handles a subject of this character with such sound common sense. His reproof to London medical men who publish books of this character for the advancement of no scientific end is very commendable, but his recommendation of a censorial bureau, at the public expense, for such matters, seems Utopian. If we were to criticise his pathology of kidney diseases, we should say he laid too great stress upon the blood as a conditioning cause, and too little upon mechanical and nervous influences. His ideas in regard to the treatment of these diseases are very sensible. The book can be commended unqualifiedly.

Acne: its Ætiology, Pathology, and Treatment. A Practical Treatise based on the Study of One Thousand Five Hundred Cases of Sebaceous Disease. By L. Duncan Bulkley, A. M., M. D., Physician to the New York Skin and Cancer Hospital, etc. New York and London: G. P. Putnam's Sons, 1885. Pp. x–280. [Price, $2.]

Like the same author's monograph on eczema, this is a thoroughly practical treatise upon a common, annoying, and obstinate affection of the skin. The title is somewhat misleading, as under the common term "acne" we have here presented to us seborrhœa oleosa et sicca, comedones, and milium, and can only wonder that we do not find xeroderma, molluscum contagiosum, and the rest of the *steatoses.* But, though we can not commend the classification, we can not quarrel with it, as it gives us a valuable chapter on the three diseases specified. The sections on treatment, embodying the results of the author's wide experience, are full and eminently useful; the chapter on diet and hygiene contains much good advice; and the collection of formularies will be found of service. Dr. Bulkley is to be congratulated upon securing the services of Dr. George T. Elliot, whose drawings, made from original sections, are exquisite and greatly enhance the value of the book.

Poisons: their Effects and Detection. A Manual for the Use of Analytical Chemists and Experts. With an Introductory Essay on the Growth of Modern Toxicology. By Alexander Wynter Blyth, M. R. C. S., F. C. S., etc. With Tables and Illustrations. Volume II. New York: William Wood & Co., 1885. Pp. 335 to 668.

The first one hundred pages of this volume are devoted to the mydriatic group of alkaloids, physostigmine, colchicine, digitaline, and several non-classified drugs. There is an interesting chapter on snake-poison, also a thorough discussion of the subject of ptomaines. After treating of the oxalic group of poisons, the author considers under Part VIII the metals, beginning with arsenic and concluding with barium. Fifty pages are given to arsenic, and upward of eighty to the remaining substances. In the appendix there is a practical chapter on the examination of blood-stains, together with one of the best epitomes on antidotes that we remember to have read. A chapter on the treatment of cases of poisoning should be so arranged that the reader can find the desired information at once. This is pre-eminently the case with the one in the book before us. All useless details have been omitted, and the directions given are in few words and to the point. The index is full and satisfactory. The work is a scholarly one, and is especially valuable on account of the profuse foot-notes.

Hints in Sickness. Where to go and what to do. By Henry C. Burdett, Founder of the Home Hospitals Association for Paying Patients. London: Kegan Paul, Trench, & Co., 1883.

This book is designed as a guide to the various hospitals in England and Wales. It will therefore prove more useful, as a rule, to our transatlantic brethren than to us. There are also some useful hints in regard to the proper course of action in emergency cases, and such information should be widely diffused.

BOOKS AND PAMPHLETS RECEIVED.

On some Forms of Paralysis from Peripheral Neuritis, of Gouty, Alcoholic, Diphtheritic, and other Origin. The Harveian Lectures for 1885. By Thomas Buzzard, M. D., Fellow of the Royal College of Physicians, London, etc. London: J. & A. Churchill, 1886. Pp. viii–147.

Hand-book of Practical Medicine. By Herman Eichhorst, Professor of Special Pathology and Therapeutics, and Director of the University Medical Clinic, in Zurich. Vol. II. Diseases of the Digestive, Urinary, and Sexual Apparatus. One Hundred and Six Wood Engravings. New York: William Wood & Co., 1886. Pp. vii–361. [Wood's Library of Standard Medical Authors.]

A System of Practical Medicine. By American Authors. Edited by William Pepper, M. D., LL. D., Provost and Professor of the Theory and Practice of Medicine and of Clinical Medicine in the University of Pennsylvania, assisted by Louis Starr, M. D., Clinical Professor of Diseases of Children in the Hospital of the University of Pennsylvania. Volume V. Diseases of the Nervous System. Philadelphia: Lea Brothers & Co., 1886. Pp. 10–19 to 1317.

Sulla Presunta Riproduzione totale della Milza. Seconda Comunicazione preventiva. Pel Dott. Cecchini Settimo, Assistente nell' Instituto Anatomo Patologico dell R. Univ. di Modena.

Delle Injezioni di Olio Essenziale di Trementina per la Cura Radicale delle Fistole Anali, della Carie dell' Osso Petroso, delle Fistole Dentarle, dell Condotto Stenoniano e delle Fistole Atoniche, pell Dott. Cecchini Settimo, già Assistente di Anatomia patologica nella R. Università de Messina.

An Introduction to the Pathology of Cancer and Tumor Formation, on the Basis of Evolution. By W. Roger Williams F. R. C. S., etc. Part I, Growth; Part II, Reproduction. London: John Ball & Sons.

Transactions of the Alumni Association of the Woman's Hospital in the State of New York. First meeting, January 20, 1886. [Reprinted from the "New York Medical Journal" for private distribution.]

On Inversion of the Uterus, with Eleven Cases successfully treated by the Sigmond Repositor. A Post-graduate Lecture delivered at the Chelsea Hospital for Women. By James H. Aveling, M. D., etc. London: J. & A. Churchill, 1886. Pp. 9 to 54.

A Contribution to the Pathology of Hemianopsia of Central Origin (cortex-hemianopsia). By E. C. Seguin, M. D., etc. [Reprinted from the "Journal of Nervous and Mental Disease."] For sale by G. P. Putnam's Sons, New York. [Price, 50 cents.]

Zymotic Diseases considered with Reference to their Cause, Extent, and Prevention. By R. French Stone, M. D. Indianapolis. [Reprinted from the Report of the Indiana State Board of Health.]

Hard Chancre of the Eyelids and Conjunctiva. By David DeBeek, M. D., Assistant to the Chair of Ophthalmology. Cincinnati: R. Clarke & Co. [Contributions from the Ophthalmic Clinic, Medical College of Ohio (No. 3).]

Circulars of Information of the Bureau of Education. No. 5, 1885. Physical Training in American Colleges and Universities. By Edward Mussey Hartwell, Ph. D., M. D., of Johns Hopkins University. Washington: Government Printing Office.

The Treatment of Diphtheria. By S. Henry Dessau, M. D. New York. [Reprinted from the "Medical Record."]

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THE MICHIGAN CASES OF ICE-CREAM POISONING.

The regular July meeting of the Michigan State Board of Health was largely taken up with the reading of an elaborate report by Professor Vaughan, of the University of Michigan, who is a member of the board, entitled "Tyrotoxicon; its Presence in Poisonous Ice-cream, its Development in Milk, and its Probable Relation to Cholera Infantum and Kindred Diseases." We are indebted to the board's excellent secretary, Dr. Henry B. Baker, of Lansing, for a copy of the printed report of the proceedings. The cases of ice-cream poisoning which were the chief subject of Dr. Vaughan's report took place about the 10th of June, the board meeting at which the report was made was held on the 13th of July, and the authoritative printed account reaches us in time to be noticed before the expiration of the latter month. This promptness is certainly admirable, reflecting credit alike upon Professor Vaughan, the board, and the secretary.

Briefly, the circumstances of the poisoning were these: On some festal occasion in the town of Lawton, those in attendance were given, among other things, two kinds of ice-cream, one flavored with vanilla and the other with lemon. Those who ate of the latter suffered no ill effects; but about eighteen of those who ate of the vanilla ice-cream (including Dr. Moffitt, of Lawton) were made seriously sick, although, fortunately, so far as we are informed, none of them died. Dr. Moffitt's account of the symptoms is as follows:

> "About two hours after eating the cream every one was taken with severe vomiting, and after from one to six hours later with purging. The vomit was of a soapy character, and the stools were watery and frothy. There was some griping of the stomach and abdomen, with severe occipital headache, excruciating backache, and 'bone' pains all over, especially marked in the extremities. The vomiting lasted from two to three hours, then gradually subsided, and everybody felt stretchy and yawned in spite of all resistance. The throats of all were œdematous. One or two were stupefied; others were cold and experienced some muscular spasms. A numb feeling, with dizziness and momentary loss of consciousness, was complained of by some. The temperature was normal; the pulse from 90 to 120; the tongue dry and chapped. All were thirsty after the vomiting subsided, and called for cold water, which was allowed in small quantities with no bad results. After getting out, no one of the victims was able to be in the hot sun for several days, and even yet (about ten days after the poisoning) the heat affects myself. I attended twelve persons, besides being sick myself, and all were affected in pretty much the same way. Several complain yet of inability to retain food on the stomach without distressing them. The man who made the cream took a teaspoonful of it, and he vomited the same as those who ate a whole dish, but not so often nor for so long a time. All are affected with an irresistible desire to sleep, which can scarcely be overcome. Even yet some of us feel that drowsy condition, with occasional occipital headache."

As to the way in which the ice-cream was made, the maker, Mr. J. W. Johnson, answered certain inquiries by Professor Vaughan as follows:

> "The milk from all the cows was mixed together in the making of the custard. The custard for the lemon and vanilla was all one custard; made and mixed before the extracts were put in. We had previously used the same brands of extracts (Jennings's best), both lemon and vanilla, with no bad results. The food of the cows in the morning and evening consists of oats and corn, ground together and fed dry, with clover hay. I have never seen anything suspicious in the pasture or food. There is a running stream of water, coming from a spring, in the pasture. There is plenty of shade. At evening the cows are driven from the pasture and placed in the stable or yard, according to the season. The stable and yard are open for inspection at any time. My residence is in the center of the village, and the board of health would not allow me to stable and yard my cows there if there were any bad odors during the summer. The teats are thoroughly washed before each milking."

After Professor Vaughan had examined a specimen of the poisonous ice-cream, he received a further communication from Mr. Johnson, in which that gentleman said:

> "The milk of which the cream was made was fresh and sweet morning's milk, only reserving with it the cream of the milk of the night before from the same cows. The milk is kept in a cool, clean milk cellar. The custard was made about noon that day, and immediately afterward the process of freezing was begun. The vessels were all thoroughly cleaned. There was no possibility of any impurities adhering to them, for they were scalded, wiped and dried before being used. The only ingredients used were the milk, cream, eggs, sugar (best granulated), and the flavoring. The lemon cream was frozen first, then taken out, put into the packers, and packed solid with ice and salt. Then the vanilla cream was frozen in the same manner. I used the best Jennings's extract, about the usual quantity, not in excess. The cream was eaten in the evening by many people of the village. All of those who ate of the vanilla cream were made sick, and none of those who ate of the lemon cream suffered any inconvenience. Now, the milk was the same in both, milked from the same cows the same morning that the cream was made, so that there was no difference in the custard used in making the vanilla cream and the lemon cream, but it turned out that the one made people sick and the other did not. We have continued making cream since in the same manner without the least change of the ingredients or the apparatus, except we have not used vanilla extract, but lemon and pineapple, and it has been freely eaten and no one has been made sick by it. Clearly in my mind the milk does not account for the trouble. One thing further: Of course the cream which you examined has been made since the ninth day of June, and may have undergone changes which would result in generating the poison referred to in the papers [certain newspaper accounts of the finding of the poison], and which would not have been found in the cream had it been examined when fresh."

Naturally, suspicion fell at first on the vanilla extract used by Mr. Johnson, but Professor Vaughan and his assistant at once proved its innocence by testing its effects on their own persons in quantities far exceeding those that could have been ingested by any of the individuals who had been poisoned. The similarity of the symptoms to those of cheese poisoning led Professor Vaughan to examine the specimen for tyrotoxicon. That substance was found, and a small amount of it was given to a kitten. Within ten minutes the animal began to retch, and soon vomited. The retching and vomiting continued for two hours or more, and afterward there were several watery stools. Then, although the kitten could walk about the room, it was unable to retain any food. After three days, during which time the kitten's condition continued unimproved, it was killed and its abdominal organs were examined. "We certainly expected," says Professor Vaughan, "to find marked inflammation of the stomach. But we really did find the stomach and small intestines filled with a frothy, serous fluid, such as had formed the vomited matter, and the mucous membrane very white and soft. There was not the slightest redness anywhere. The liver and other abdominal organs seemed to be normal." From these facts, and because he has succeeded in producing tyrotoxicon in milk by infecting it with products known to contain it, Professor Vaughan concludes—and legitimately, we think—that that substance was the agent that caused the poisoning in the Lawton cases. The mystery is, how the germ or ferment that gave rise to it got access to the ice-cream. As concerns the production of the poison in the vanilla ice-cream exclusively, although it was made from the same lot of custard as the lemon cream, the two differing only in the flavoring, Professor Vaughan makes this suggestion: "The fermentation going on in the custard, and probably begun in the milk, was arrested in that part flavored with lemon by the freezing, which was begun immediately. But while the lemon cream was being frozen that part of the custard which was to be made into vanilla cream continued to ferment, and before the freezing process was begun enough of the poison was generated to seriously affect those eating of it." This suggestion is rational, and we have no disposition to question its sufficiency, but, since so little is yet known of the conditions under which the formation of tyrotoxicon takes place, it might be well to ascertain if lemon-flavor is not capable of checking the process. If that should turn out to be the case, public opinion ought to insist on it that purveyors of ice-cream shall furnish the lemon-flavored article more generally. At present it is often impossible to obtain it, for the reason, it is to be presumed, that the public palate is more tickled with other flavors.

A year ago (in our issue for August 1, 1885, page 138) we gave a summary of Professor Vaughan's account of his examinations of "sick" cheese, and of his discovery of a substance in it to which he gave the name tyrotoxicon. In the report now under consideration he speaks of it as a ptomaine and likens its effects in some respects to those of atropine. He suggests that its formation may have an intimate relation to the butyric-acid fermentation, as a substance isomeric with coniine was obtained by Selmi some years ago by the action of butyric acid on ammonia. He has not yet obtained tyrotoxicon in quantities sufficient for an ultimate analysis, and probably he applies the term ptomaine to it in something of a conventional sense, as a convenient preliminary designation, and is not prepared to set it down definitively as an alkaloid. He is inclined to think that its formation is due to a micro-organism, and mentions Dr. Sternberg's discovery of a new micrococcus in "sick" cheese. He also remarks of Dr. Lauder Brunton's suggestion that there are two poisons present in such cheese that it is "altogether possible." The danger of ptomaines forming in gelatin having been pointed out by Professor Bartley, of Brooklyn, it is proper to state that gelatin is said not to have been used in the preparation of the Lawton ice-cream.

Professor Vaughan concludes his report by calling attention to the similarity of the symptoms of cholera infantum to those of tyrotoxicon poisoning, and to the obvious inference that that disease may be caused or kept up by contamination of the nursling's milk with that principle, very likely as the result of the utter impossibility of adequately cleansing the abominable tube-bottle, except with the appliances of a chemical laboratory. A germ which forms a poisonous ptomaine by its growth in milk may, he remarks, be wholly harmless when placed in a meat or rice preparation. This suggestion may well lead to the question whether milk should not be rigidly excluded for a time from the diet of infants affected with this disease. All things considered, this report of Professor Vaughan's must be regarded as one of the most notable contributions to our knowledge of the subjects with which it deals.

THE PROPOSED CONGRESS OF AMERICAN PHYSICIANS AND SURGEONS.

Since we last referred to the prospects of the scheme for a confederation of the various national special societies, three of the latter have held their annual meetings. The American Otological Society, as will be seen by the report of its proceedings published elsewhere in this issue, discussed the proposition and appointed a committee of conference made up of some of its most prominent members. In his inaugural address, the new president of the American Neurological Association, Dr. Mills, made some suggestions concerning the details of the organization and conduct of the proposed congress. The first one was that the congress should meet biennially. Such a course, provided, as would doubtless be the case, the individual societies still held annual meetings, would tend materially to allay any anxiety lest those societies should to some extent lose their autonomy. That some such feeling is entertained we infer from the action taken by the American Ophthalmological Society, our report of whose proceedings the pressure on our space compels us to lay over until next week. That body also appointed a committee of conference, consisting of Dr. Wadsworth, of Boston; Dr. Bull, of New York; Dr. Harlan, of Philadelphia; Dr. Theobald, of Baltimore; and Dr. Fryer, of Kansas City. At the same time, however, it passed this resolution: "*Resolved*, That it is the sense of this society that its welfare would be put in peril by any alliance or co-operation which would interfere with its autonomy or independent meeting."

Dr. Mills further suggested that the sessions of the Congress should be confined to the mornings, and that the afternoons should be devoted to the meetings of the individual societies; also that the latter should be successively represented in the office of president of the Congress.

MINOR PARAGRAPHS.

THE FLOATING HOSPITAL OF ST. JOHN'S GUILD.

It is a pleasure to refer from year to year to this deserving charity, now in the ninth year of its existence. Its purpose is as familiar to most of those who remain in town during the summer as "a twice-told tale," but for the benefit of those who are unfamiliar with it we may say that it operates through physicians and dispensaries mainly, printed tickets being distributed by this means to the sick poor, that is, the tenement-house sick; and most of the physicians in this city know what that signifies. The only conditions which are required of the recipients of this charity are that they should be sick (those with infectious diseases being excepted), and that they should be poor. The principal beneficiaries are children under six years of age, with the wasting diseases peculiar to infancy and childhood and hot weather; but many a weary mother goes with them and gets the combined advantages of a holiday, fresh air, and a good meal, together with the satisfaction which comes from the improvement in her child's condition. The boat leaves the foot of King Street at 8.30 A. M., Tuesdays, Thursdays, and Saturdays, and reaches her anchorage at Cedar Grove, at the lower extremity of Staten Island, at noon. Every one is then supplied with as much nutritious beef-soup and bread as he or she can eat, and each of the children can have in addition a pint of milk. If a child is very sick it can be placed in the hospital at Cedar Grove, the mother remaining to take care of it. The hospital, which now has fifty beds, faces the sea, its ventilation and hygienic arrrangements are admirable, and it is presided over by an enthusiastic and capable gentleman recently a member of the house staff of Bellevue Hospital. The only perceptible want is a donation of from six to ten thousand dollars to finish the construction of the hospital and double its capacity. There is a great deal of solid truth in the quaint old saying, "You can't preach charity successfully to a gaunt stomach," and, on the other hand, the effectiveness of an open-handed liberality like that of St. John's Guild is equally apparent. The medical profession is one which yields to none in practical charity and humanity, and it is now appealed to to take a greater interest in making this charity more effective—that is, more wide-spread. That the profession is interested in it is manifested by the number of honorable and familiar names which appear in its advisory board. It is desired that the younger men should participate by distributing its printed invitations among their poor patients who are believed to be worthy. It is a little thing to do, and takes but little time. The tickets can be had by addressing the Rev. Dr. George Corey at the office of the guild, 21 University Place. The barge upon which the excursion is taken has a capacity of twelve hundred, and it is desired that it should carry as many as this on each trip.

MEDICAL MATTERS IN THE ARGENTINE REPUBLIC.

Until within the last few years the study of medicine in the Argentine Republic was attended with much difficulty, and the facilities for instruction were very incomplete. For this reason many students went to Europe or to Brazil to pursue their studies. Now, however, there is a good school for medical instruction, and a hospital which furnishes ample clinical material. Formerly, anatomy, physiology, and pathology were taught only from books. Now there are a good amphitheatre for dissections, a laboratory for histological study, and one in which pharmacology is taught, and in a short time a physiological laboratory will be completed. The publication of medical books has been begun, and several medical journals are issued, among them notably the "Revista Argentina de Ciencias Médicas," which is well edited and neatly printed. The project of establishing a Pasteur Institute in Buenos Ayres seems to be taking form. The National Congress has voted $5,000 toward its establishment, and the Provincial Congress has voted $3,000 for the same purpose. The executive commission reports that the president, Don Ignacio Pirovano, is receiving new accessions daily, and that the popular subscription gives promise of the most gratifying results.

PASTEUR AND SPITZKA.

In referring, in our issue for June 19th, to Dr. Spitzka's recent experiments in regard to the preventive inoculation of rabies which had been made the subject of comment in the newspapers, we remarked that it was proper to say "that the profession may rest assured that Dr. Spitzka is not pursuing so profitless and unscientific a course as that of systematically setting about a refutation of M. Pasteur's doctrines on the subject." That opinion has been borne out by the results of Dr. Spitzka's continued experiments—results, however, that do, in a great measure, cast doubts upon the tenability of Pasteur's position. Dr. Spitzka maintains that rabies, or a disease so similar that a microscopic examination of the brain fails to detect any difference, can be produced in the dog by the injection into the brain of almost any foreign substance; that, while he does not pretend that he can cure hydrophobia in the dog (he asserts that the disease does not exist in man), he maintains that the animal can have a chance for recovery if the cause of the irritation to the brain can be removed; that the bite of a rabid dog is no more dangerous than that of an angry man, and that hydrophobia (so called) in man is the result of mental delusion, deaths occurring from it being purely from fright. This latter assertion Dr. Spitzka strengthens by citing the fact that Pasteur has failed to produce the disease in monkeys, who are closely allied to man in their ability to resist a poison of that nature, and that young children who are incapable of thinking and not subject to the effects of fear do not die of hydrophobia. We shall look with much interest for the further results of Dr. Spitzka's experiments, feeling assured that his deductions will be based upon the most scientific and impartial methods of research.

ITEMS, ETC.

Infectious Diseases in New York.—We are indebted to the Sanitary Bureau of the Fourth Division of the Health Department for the following statement of cases and deaths reported during the two weeks ending July 27, 1886:

DISEASES.	Week ending July 20.		Week ending July 27.	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever	10	2	10	7
Scarlet fever	34	6	20	5
Cerebro-spinal meningitis	7	7	2	2
Measles	73	9	71	10
Diphtheria	57	25	51	24
Small-pox	1	0	1	0

Diphtheria is reported epidemic in the town of Melrose, Mass., twenty-five or more cases of the disease and eight deaths having occurred during last week.

Arsenic in Wall-paper.—At the regular meeting of the South Middlesex, Mass., District Medical Society, held on Wednesday of last week, papers on arsenical poisoning from wall-paper were read by Dr. E. S. Woods, Professor of Chemistry in the Harvard Medical School, Dr. Walcott, of the State Board of Health, and others. Several cases occurring in their own practice were cited, and the opinion was expressed that the public should be protected by legislative action.

Poisoning from Ice-cream.—The minister and about forty of the congregation of the North Baptist Church, at Eastport, Me., are said to have been poisoned by eating ice-cream on Friday of last week. The effects were attributed to poisonous extract used in the cream, and were manifested by violent cramps and vomiting.

St. Francis Hospital, Jersey City.—Dr. J. Leonard Corning, of New York, has been appointed consultant in nervous diseases.

Cast up by the Sea.—On Saturday last we received the March number of the "Glasgow Medical Journal," and "La Crónica Médical," of Valencia, for February 20, 1886. Both journals bore evidence of having been in the mails recovered from the Oregon.

An Electric Sword is said to have been invented at Shanghai, which, when the point touches the person attacked, sends a powerful shock through him. The battery, it is said, is carried at the waist of the wearer and is connected with the sword by means of insulated wires.

Barbers and Surgeons.—The "Boston Post" says that "barbers were originally surgeons," and adds, apparently with much feeling, "A great many of them are now."

A Druggist's Mistake.—It is reported that a Cleveland, Ohio, druggist, in filling an order for sugar of milk, substituted arsenic, which was administered to three children by the mother, who also took some. The mother is said to have died, and the lives of the children are despaired of.

Army Medical Matters.—The President has sent to the Senate the following nominations: Lieutenant-Colonel David L. Magruder to be Surgeon, with the rank of Colonel; Major Charles T. Alexander to be Surgeon, with the rank of Lieutenant-Colonel; Captain Henry M. Cronkheit to be Surgeon, with the rank of Major; and Freeman B. Walker, of Georgia, to be Assistant Sugeon, with the rank of First Lieutenant.

A Government Investigation of Hydrophobia.—Congressman Swinburne's bill authorizing a scientific investigation into the causes of hydrophobia has been favorably considered by the House Committee on Commerce.

The New Jersey Pharmacy Law, which requires apothecaries' shops to be at all times in charge of registered pharmacists, is to be strictly enforced, it is announced. The shops are to be visited by representatives of the State Board of Pharmacy, and their owners notified of the provisions of the law.

Personal Items.—Dr. N. S. Davis, of Chicago, and Dr. William Brodie, of Detroit, sailed for Europe on Wednesday.

The Importation of Rags, which has for a long time been most unwarrantably hampered by certain sanitary officials, is likely to be put upon its proper basis by the recent order of the Acting Secretary of the Treasury prohibiting any discrimination between rags and other merchandise.

The Oleomargarin Bill.—The President seems to share the doubts we have expressed as to the expediency of this measure. In spite of the Attorney-General's opinion that it is constitutional, which need not be questioned, it seems objectionable, partly because it is an infringement of the traditional sovereignty of the individual States, and partly because, increase of the revenue being neither desirable nor the real object of the bill, it is a piece of indirect legislation unworthy of such a government as ours and almost certain to work badly as a precedent.

Hofrath Rosenthal.—We learn from the "Deutsche Medizinal-Zeitung" that Dr. Jacob Rosenthal, of Würzburg, lately had a jubilee on the occasion of his seventieth birthday. His friends attended from far and wide, several addresses were made, and telegraphic messages of congratulation were sent by Professor Virchow, Dr. Gerhardt, and Dr. von Bergmann, of Berlin; Professor P. Müller, of Berne; Dr. von Kerschensteiner and Professor Angerer, of Munich; Dr. Hofmann, of Regensburg; Dr. Merkel, of Nuremberg, and others.

The Recognition of Digitalis post mortem.—A correspondent writes that he questions the accuracy of a statement he has seen in print to the effect that the recognition of digitalis and its proximate principles post mortem in cases of poisoning is so difficult as to be practically impossible; and he bases his doubt on the fact that, in experiments on animals, he himself has never met with any such difficulty. Our impression is that the facility of recognition depends chiefly on the amount of the drug that has been ingested. In the case of the crude drug, the leaves or the seeds, the identification has to be made with the microscope, unless the amount is great enough to allow of the separation of one or more of the varieties of what is commonly called digitalin in quantity sufficient for testing. As our knowledge of the chemistry of digitalis is by no means satisfactory, we must infer that our correspondent's success has been in great measure due to his skill as an analyst, and that to the ordinary experimenter the recognition of small quantities of the digitalis principles will prove very difficult, provided he does not know beforehand that what he is seeking for is present in the specimen.

Army Intelligence.—*Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from July 18, 1886, to July 24, 1886:*

PERIN, GLOVER, Colonel and Assistant Surgeon-General. Leave of absence extended one month. S. O. 165, A. G. O., July 19, 1886.

GARDNER, WILLIAM H., Major and Surgeon. Granted four months' leave, to take effect August 10th, or as soon thereafter as his services can be spared. S. O. 165, A. G. O., July 19, 1886.

DE WITT, CALVIN, Major and Surgeon. Assigned to duty at Fort Sully, Dakota. S. O. 66, Department of Dakota, July 14, 1886.

DICKSON, JOHN M., Captain and Assistant Surgeon. Ordered from Alcatraz Island, California, to Fort Mason, California. S. O. 56, Department of California, July 8, 1886.

COCHRAN, JOHN J., Captain and Assistant Surgeon. Ordered from Fort Mason, California, to Presidio of San Francisco. S. O. 56, Department of California, July 8, 1886.

GIBSON, A. J., Captain and Assistant Surgeon. Ordered from Fort Winfield Scott, California, to Alcatraz Island, California, on return from leave of absence. S. O. 56, Department of California, July 8, 1886.

KANE, J. J., Captain and Assistant Surgeon. Ordered from Fort Ringgold, Texas, to Fort Hancock, Texas. S. O. 85, Department of Texas, July 13, 1886.

CARTER, WILLIAM F., Captain and Assistant Surgeon. Ordered from Fort Concho, Texas, to Fort Ringgold, Texas. S. O. 85, Department of Texas, July 13, 1886.

Marine-Hospital Service.—*Official List of Changes of Stations and Duties of Medical Officers of the United States Marine-Hospital Service, for the week ended July 24, 1886:*

Carmichael, D. A., Passed Assistant Surgeon. Granted leave of absence for thirty days. July 24, 1886.

Magruder, G. M., Assistant Surgeon. To proceed to Cairo, Illinois, for temporary duty. July 22, 1886.

Society Meetings for the Coming Week:

Monday, *August 2d:* Morrisania Medical Society (private); Brooklyn Anatomical and Surgical Society (private); Utica Medical Library Association; St. Albans, Vt., Medical Association; Hartford, Conn., City Medical Association.

Tuesday, *August 3d:* Elmira Academy of Medicine; Buffalo Medical and Surgical Association; Ogdensburg Medical Association; Hudson County, N. J., Medical Society (Jersey City); Androscoggin, Me., Medical Association (Lewiston); Hampden, Mass., District Medical Society (Springfield).

Wednesday, *August 4th:* Medical Society of the County of Richmond, N. Y. (Stapleton).

Thursday, *August 5th:* Society of Physicians of the Village of Canandaigua, N. Y.

Saturday, *August 7th:* Clinical Society of the New York Post-Graduate Medical School and Hospital; Miller's River, Mass., Medical Society.

OBITUARY NOTES.

Dr. Alfred S. Purdy died on the 22d inst. He was born in New York in 1808, and was a graduate of the College of Physicians and Surgeons, of the class of 1831. He was a member of the Medical Society of the County of New York, of the Academy of Medicine, and of the Pathological Society, and at one time he was the president of the Alumni Association of the College of Physicians and Surgeons. For many years Dr. Purdy had a large family practice, and he was widely known in the profession and highly esteemed.

Dr. Charles W. Fabyan, of Providence, R. I., one of the oldest and ablest physicians of that city, died July 23d, after an illness of two weeks. He was born in Scarborough, Maine, March 11, 1813. He was graduated from Bowdoin Medical College in 1837. For a few years he practiced his profession in Newmarket, N. H., but in 1840 he came to Providence. Dr. Fabyan was a quiet, faithful physician of great skill. He was an earnest Christian, beloved by everybody for his sterling worth, and held in deep respect by the medical fraternity of Rhode Island. He leaves a wife and two daughters.

Letters to the Editor.

THE SOCIAL EVIL.

New Haven, Conn., *July 23, 1886.*

To the Editor of the New York Medical Journal:

Sir: Your leading article upon this topic last week will doubtless bring forth some discussion. Your opinion that women should bring something to bear upon the question is also my own, yet women are very loth to touch the hateful subject, which is, after all, a most important one for them. Opening all the avenues of industry for women, leaving them free to follow any calling for which they can fit themselves, inspiring them with the desire to fill honorable positions in the community, irrespective of that which can be occupied by them as mothers and wives, will no doubt do much to bring about a better condition of affairs. But too much stress can not be laid upon the fact that, whatever occupation a woman may be engaged in, she is still a woman, needing the companionship of men, brothers, friends, husband. She yet retains the motherly instincts, and loses much of that affectionate gentleness which makes the charm of true womanly character if she be not gratified by some object over which she can exercise a protecting care.

To learn that there are three hundred thousand women in New England and New York whom the law forbids to become mothers and wives is to feel that here is pent up a force, in a very small compass, that must necessarily find vent or endanger the social fabric.

Comparatively few of these women are capable of giving, or, if capable, care little to give, much thought to the highest questions of morals. Yet they all alike keenly feel life's disappointments, and, like the daughter of Jephthah, are forced to bewail their state. Like this maiden of ancient story also, one reason for their grief is because their fathers desired victorious ending to a dreadful war, in which men who might have been husbands were slain by thousands. One more of Nature's evidences of the truth that where the sexes can not work side by side the result is detrimental to both. It is quite common among us to speak of the wickedness of men, the cruelty and neglect with which they treat their wives and children, and the growing tendency of the younger men to lead single lives up to the ages of thirty-five or forty and end by marrying in the most unfortunate and unexpected manner. All this appears to me but the natural result from the crowded ranks of the opposite sex. There are too many women for the demand, and Sarah, Jane, and Elizabeth can not afford to wait and be sought as the loveliest of women, but they must be alert with every art which they possess, and endeavor to secure something that will answer for a husband. They must be wary not to let the simple fish see the hook, lest he swim away to be caught by one better concealed.

The sweet, ingenuous, confiding girl of the poets is fast going out of existence. The pure, loving, unselfish women who are by nature best fitted to be wives and mothers are finding their places filled by women who can artfully entrap their victims. After marriage comes the awakening, but human nature, too proud to own itself defeated, conforms to its circumstance as best it can. Cases of desertion, cruelty, adultery, suits for divorce, fill the courts. The pretense of affection is followed by virulent hatred. Children are born to mothers whose blood is fevered with the poison. Attempts at abortion have failed and the fruit of the connection must be brought forth at full term, with inherited tendencies to unspeakable vices; for the sins of the parents are visited upon the children to the third and fourth generation. But ever-blessed be the promise of the written word! The tendency of nature is to heal all hurts, and it is to thousands of them that love Him that God will show his mercy. Therefore, while the outlook is dark enough, and there is no help for it that many women must be desolate, yet the light will not come by the greed of gain, nor by the gratification of the lusts of the flesh. Women *must* find their work in high and generous fields; and, understanding that they can not all be wives and mothers, they may be content to be friends and teachers of their race. If they may not transmit by inheritance the loving kindness that fills them with strong and tender yearning, and is, in itself, often a greater temptation than any lower passion, they may pour it out, without stint, on the helpless waifs that drift upon the waves of society, they may use it to make the sufferings of life more bearable, creating a new world for themselves, and, by this very best use to which they can put their desolation, help to bring about the advent of that improved state, "where men shall not learn war any more, but every one shall sit under his own vine and fig-tree, with none to make him afraid."

Not to condemn the world are these women left alone, but that the world, through the sacrifice of the lower to the higher, which has been going on through all the ages, may evolve at length the perfect moral being.

Lucy M. Creemer, M. D.

New York, *July 25, 1886.*

To the Editor of the New York Medical Journal:

Sir: In your comments on "Social Ethics," Journal of July 17, 1886, you say it is assumed that we have within us "an enemy"—the sexual impulse. It is nowhere expressed or implied in this paper or its discussion that the "sexual impulse" is *per se* an *enemy*. It only becomes an "evil" when perverted or abused. In itself it is God's best gift to mankind. The most potent stimulant accessible to the race, capable, under favorable conditions, of bringing into existence new individuals, thus perpetuating it. And not only so, but, wisely and naturally utilized, capable of generating mental and physical power to each individual all through life. The reason laws, civil and sacerdotal, have failed in preventing evil from the sexed condition of *mankind* (as also of organized nature) is, they have attempted to stifle rather than healthfully develop this latent power. There is no one thing so important to the weal or woe of society as to know how to live healthfully and harmoniously in marriage. Clergymen and physicians are in a position to teach, and they are expected to give instruction in all that pertains to mental and physical welfare. This is an important branch in which very little instruction has been given. It is to be hoped that the coming generation may have more knowledge in this direction than the present or the past.

Respectfully,
William M. McLaury.

⁂ We would remind Dr. McLaury that our comments related not to his paper alone, but to the other contents of the pamphlet also.

Proceedings of Societies.

AMERICAN NEUROLOGICAL ASSOCIATION.

Twelfth Annual Meeting, held at Long Branch, N. J., Wednesday, Thursday, and Friday, July 21, 22, and 23, 1886.

Wednesday's Proceedings.

The Retiring President's Address.—The meeting was called to order by the president, Dr. Burt G. Wilder, of Ithaca, N. Y., who in his retiring address confined his remarks to a brief discussion of what he believed to be a new fact—namely, *the accurate collocation of a suture and fissure in the human fœtus.* In three alcoholic fœtuses in Cornell University, from three to seven months advanced, the lambdoidal suture directly overlay a short but deep fissure, heretofore seldom noticed, or else misinterpreted, which might be called the *lambdoidal fissure.* The fissure was very distinct and deep, but had no ental correlative in the specimens examined. He believed that the fissure itself persisted in man as well as in apes (Bischoff and Huxley), but lost its relation with the suture.

The president then introduced the president-elect, Dr. Charles K. Mills, of Philadelphia, who took the chair. The association, in accordance with the recommendation of the Council, elected the following new members: Dr. F. X. Dercum and Dr. James H. Lloyd, of Philadelphia; Dr. E. D. Fisher, Dr. B. Sachs, and Dr. J. Rudisch, of New York.

The Inaugural Address was then delivered by the new president. After briefly referring to the scientific work done by the members of the association, which had appeared in medical literature, he referred to the proposed completion of the organization of the Congress of American Physicians and Surgeons by the consolidation of the several national societies now devoted to the study of special subjects. He favored the proposition, and hoped that the association would take it into favorable consideration. He suggested, however, that the meetings of the Congress should be held biennially, and that a plan should be devised by which the several societies should, in succession, be represented in the office of president; also that, when the Congress met, there should be a general session in the morning, and that each society attend to its special work in sessions held in the afternoon.

The subject proper of the address was the consideration of some general features belonging to the brains of criminals, with demonstrations from alcoholic specimens. They were the brains of murderers; also the brain of a Chinese and that of a feeble-minded individual. The peculiarities mentioned related to bulk, simplicity of convolutions and fissures, atypical asymmetry, confluence of fissures, etc., and in these respects they were believed to belong to a low order of human beings.

The subject was discussed by Dr. B. G. Wilder, of Ithaca; Dr. Joseph Jastrow, of Baltimore; Dr. L. C. Gray, of Brooklyn; Dr. F. X. Dercum, of Philadelphia; and Dr. W. R. Birdsall and Dr. B. Sachs, of New York.

A Case of Lesion of both Temporal Lobes producing General Loss of Memory of Events, without Word-deafness and without Deafness, was the title of a paper read by Dr. L. C. Gray, of Brooklyn. The mental faculties other than loss of memory were apparently intact. The autopsy revealed a normal skull and dura mater, and lepto-meningitis of both the right and the left temporal convolutions, extending around the fissure of Sylvius, involving the gyrus marginalis and the bases of the ascending frontal and parietal convolutions. The patient was a man forty-three years of age, with a probable history of syphilis, who was admitted into the Hospital for Nervous and Mental Disease in June, but was transferred to the Morris Plains Asylum, where he died in October. During the whole of this time careful observation failed to detect any other symptom than that of absolute loss of memory of events without deafness or word-deafness.

A Case of Pseudo-hypertrophic Paralysis.—A brief history was read by Dr. V. P. Gibney, of New York. Microscopical sections of the spinal cord had been made by Dr. R. W. Amidon, and these were demonstrated. The changes which they exhibited consisted in a marked reduction in number of the motor cells of the anterior horns, especially in the lumbar and dorsal regions; and the cells which remained had only a few processes and took the staining material poorly.

The reader queried whether or not there was any cord lesion distinctive of the affection; was it simply an interstitial myositis; were the later stages of the disease distinguishable from each other? etc.

The discussion which followed seemed to show that the existence of a cord lesion in this disease was doubtful, and that the affection was closely allied to progressive muscular atrophy. The paper was discussed by Dr. G. W. Jacoby, Dr. B. Sachs, Dr. R. W. Amidon, and Dr. G. M. Hammond, of New York; Dr. J. H. Lloyd, Dr. F. X. Dercum, of Philadelphia; Dr. L. C. Gray, of Brooklyn; Dr. Philip Zenner, of Cincinnati, and the President.

A Case of Multiple Syphilitic Tumors in the Cerebrum of an Infant was related by Dr. Sarah J. McNutt, of New York. The special interest in the case consisted in its rarity. The microscopical examination had been made by Dr. W. H. Porter and Dr. W. A. Shufeldt, of New York.

On the Cause of Electrotonus and of the Normal Formula of Polar Reactions was the title of a paper read by Dr. G. Betton Massey, of Philadelphia. He directed attention to the laws of current distribution within large conductors, and exhibited drawings of the potential planes and lines of flow, modeled from the results of actual measurements within tubs of salt water, by Professor W. G. Adams, of England. These measurements showed that the potential of either sign gradually lessened from the electrode toward the middle of the body, where it was zero. A nerve placed anywhere between an electrode and the middle of the body would, therefore, be bathed in the polarity of that electrode, with no other polarity in the immediate neighborhood, as held by Erb, De Watteville, and others. This theory of Erb's—first advanced by Helmholtz—of a *peripolar* region of opposite polarity in the immediate neighborhood of each pole was consequently opposed to the proved laws of physics. The reader thought that the proper explanation lay in the correction of a misconception in physics; the direction of the current was probably the reverse of that now held, being from the cathode to the anode.

Thursday's Proceedings.

The Committee on Electrical Dosage, appointed at the last annual meeting, and consisting of Dr. G. W. Jacoby, Dr. W. R. Birdsall, and Dr. R. W. Amidon, of New York, reported that special rules, applicable to all cases, for the use of the current strength, or for the length of time to be devoted to each application of electricity, did not exist, and could not, in the nature of things, be formulated. Therapeutic experience was too weak a foundation upon which to build an edifice of such magnitude as electrical dosage. The committee, however, recommended the employment of all possible accuracy in accordance with present scientific knowledge, and advocated the use of the measures adopted by the International Electrical Congress of 1881; also the use of an accurate galvanometer, divided according to this system. Furthermore, the committee recommended the adoption of electrodes of certain diameters, with their areas distinctly marked upon them in square centimetres (Erb's normal electrodes). It was also recommended that a system of expressing the current used in accordance with these facts be adopted, and that a fraction be always used of which the numerator represented the number of milliampères employed and the denominator the number of square centimetres contained in the electrodes.

The report was discussed by Dr. L. C. Gray, of Brooklyn, Dr. J. H. Lloyd and Dr. G. B. Massey, of Philadelphia, and Dr. L. Weber, of New York.

The Photograph of a Microcephalic Girl fifteen years of age, received from Professor A. Forel, of Zurich, an associate member, was presented by the secretary, Dr. R. W. Amidon, of New York. The child was one of four sisters who were in the same condition, and who were the children of normal parents.

Notes on the Brain.—Dr. Wilder read a paper with this title, including: 1. *An additional case of independence of the paroccipital fissure.* The brain of a new-born negro child lately prepared by him had the paroccipital and the parietal fissures wholly independent on the right side, and barely united by a shallow junction on the left. 2. *An ental correlative of the occipital fissure in an early fœtus.* Without further observation, it could not be determined whether it disappeared in the adult or persisted as the more or less distinct elevation known as the *bulbus cornu posterioris.* 3. *The fœtal extension of the proplexus to the end of the post-cornu.* 4. *Points illustrated by the transection of a fœtal brain.* These were six in number, and most of them indicated that the thalami increased in width as development proceeded, so that in the adult human brain they formed, or seemed to form, part of the floor of the lateral ventricles (procœles), which was not the case in other mammals, excepting, perhaps, the primates.

Remarks were made by Dr. L. C. Gray, of Brooklyn, and the President.

On the Psycho-neurotic Affections which accompany and often mask Phthisical Disease was the title of the next paper, by Dr. L. Weber, of New York. The peculiar mental conditions referred to were, first, the cheerful, hopeful condition frequently seen in the acute form of phthisis; and, second, the condition of mental depression and distrustfulness met with in chronic phthisis, more especially in that form called latent. The mental symptoms, in this form, preceded, in some cases, the physical signs, and consisted of languor and depression mingled with waywardness, rather characteristic of the initial stage, and usually accompanied by general functional debility. Occasionally periods of considerable excitability might occur. There was a general disinclination to enter into any kind of amusement or continuous work, and even if it was overcome there was no interest manifested in the employment. If there was any single tendency that characterized the mental state in these cases, it was *to be suspicious.*

Illustrative cases were related by Dr. Weber, and also by Dr. R. L. Parsons, of Sing Sing; Dr. J. Van Bibber, of Baltimore; and Dr. L. C. Gray, of Brooklyn. Both the author of the paper and those who participated in the discussion directed attention especially to the efficiency of hygienic and dietetic measures in the treatment of this class of cases.

Auctioneer's Cramp.—Dr. Philip Zenner, of Cincinnati, presented a patient, a man, forty-five years old, with good family history, and always healthy, who was suffering from one of the professional neuroses, of which writer's cramp was the most common. The muscle affected chiefly was the orbicularis oris, particularly the left part. There was no evidence of further disease of the nervous system. Dr. Zenner said that the diagnosis of professional neurosis was based upon the fact of excessive use of the affected muscles in the patient's occupation, and the fact that the spasm was excited by the direct exercise of those muscles which constituted the basis of all professional neuroses. It was possible that there was a neuritis present, as had been found in various cases of writer's cramp, but the evidence of its presence in this case was not strong.

The question of diagnosis was at issue in the discussion, which was participated in by the President, who sustained it, and Dr. L. Weber, of New York, and Dr. L. C. Gray, of Brooklyn, who were not fully convinced, indeed were doubtful as to its correctness.

A living frog which was decerebrized more than seven months ago was shown by Dr. Wilder. The frog was in excellent health, and did such things as balancing itself, walking backward, winking with one eye, etc.

Remarks were made by several members.

Pseudo-tabes from Arsenical Poisoning was the title of a paper by Dr. C. L. Dana, of New York. He reported two original cases and gave the following conclusions: 1. A disease resembling locomotor ataxia may be caused by arsenic given indiscriminately, absorbed from wall-papers, or taken in single large doses. 2. Arsenical paralysis of this type and arsenical paralysis of other types are not due to a diffuse myelitis, as has been taught, but to a multiple neuritis. 3. Arsenical paralyses, like those from diphtheria, alcohol, and probably other infectious diseases and poisons, are of two types: (*a*) the ordinary mixed motor and sensory paralysis, the motor troubles and atrophy being marked; and (*b*) the pseudo-tabetic form, in which there is no pronounced motor paralysis, but in which there are marked sensory troubles, especially ataxia.

It was a general conclusion from the discussion that the lesions could not safely be said to be exclusively either myelitic or neuritic; the weight of evidence seemed to be in favor of neuritis, however, from the remarks made by the PRESIDENT, Dr. W. SINKLER, of Philadelphia, and Dr. G. W. JACOBY and Dr. B. SACHS, of New York.

The Treatment of Painless Facial Spasm.—Dr. WHARTON SINKLER, of Philadelphia, read a paper in which he gave the history of a case. Resection of the infra-orbital nerve had not produced permanent relief, and the patient had submitted to a great variety of treatment without benefit. The operation was performed by Dr. W. W. Keen, and the result was that the patient was still cured, nearly four months since it was done.

The paper was discussed by the PRESIDENT, and Dr. MASSEY and Dr. DANA.

Remarks on Epilepsy.—Dr. E. D. FISHER, of New York, read his paper, presented for membership. The author wished to show that epilepsy was central in character, and that it should be classed among organic rather than functional diseases.

Intra-cranial Hæmorrhage in the Young was the title of an inaugural paper by Dr. B. SACHS, of New York. In the diagnosis of meningeal from intra-cerebral hæmorrhage, it was of decided significance that convulsions invariably accompanied the former. This was one of the points on which discussion was desired by the author, the others being: 1. The frequency of intra-cerebral as compared with meningeal hæmorrhage in young persons free from specific disease. 2. The pathological changes in the walls of the cerebral arteries in the young.

The subject was discussed by the PRESIDENT, and by Dr. LLOYD, Dr. ZENNER, Dr. MCNUTT, and Dr. AMIDON.

Friday's Proceedings.

A Median Section of the Head of a Murderer, injected with Alcohol, was shown by Dr. WILDER. The features of the brain, which was thus hardened and exposed *in situ*, were to be discussed at another meeting in comparison with another murderer's brain. The specimen was shown in illustration of the value of the method of continuous arterial injection with alcohol, which had been applied to other heads, to brains, and to entire bodies (those of children, a chimpanzee, etc.) in the anatomical laboratory of Cornell University. The main features of the method were: 1. The reception of the head within twenty-four hours. 2. Preliminary washing out of the vessels with chloral (to which, perhaps, weak alcohol might be preferable). 3. Continuous injection of alcohol for a week. 4. When the flow became somewhat free, gradually increasing the strength of the alcohol from 65 to 94 per cent. 5. The maintenance of a low temperature. 6. Accurate division of the head with a fine saw working in a miter-box.

Moral Insanity, a Plea for a more exact Cerebral Pathology, was the title of an inaugural paper by Dr. JAMES H. LLOYD, of Philadelphia. It was an argument against the use of the term moral insanity, which rested upon just such an abstraction as Locke warned his readers to avoid. It implied that there was a moral "faculty," in the sense of a distinct agent which had its own powers and its own diseases, and might remain undeveloped in a "mind" otherwise healthy, or become diseased without at all affecting the health of the other "faculties." It would be nearer the truth to say that the whole action of an insane man's brain—judgment, emotion, memory, and will—was wrong. To say that a man's intellect was diseased and his will diseased was a sophism which had more sound than reason.

The PRESIDENT, Dr. L. C. GRAY, of Brooklyn, Professor JASTROW, of Baltimore, and Dr. R. L. PARSONS, of Sing Sing, discussed the paper, and argued in favor of the existence of *moral insanity*, and, therefore, of the retention of the term.

A New Portable Galvanic Battery was described in an inaugural thesis by Dr. J. RUDISCH, of New York. If desired, it was essentially a *dry* battery—that is, the carbon and zinc plates were separated by stout pieces of asbestos-paper, which, not only increased the internal resistance of the cell and facilitated the escape of the hydrogen bubbles, but enabled the battery to be used without a trough. The exciting fluid was a solution of sal ammoniæ (1 to 4).

Dr. F. X. DERCUM's inaugural thesis was read by title "Facts and Deductions bearing on the Action of the Nervous System."

A Resolution indorsing the Congress of American Physicians and Surgeons was adopted, and a committee of conference of five was appointed by the President—namely: Dr. L. C. GRAY, of Brooklyn; Dr. J. VAN BIBBER, of Baltimore; Dr. W. SINKLER, of Philadelphia; Dr. E. C. SEGUIN, of New York; and Dr. PHILIP ZENNER, of Cincinnati.

Officers for the Ensuing Year were elected as follows: President, Dr. L. C. GRAY, of Brooklyn; Vice-President, Dr. JOHN VAN BIBBER, of Baltimore; Secretary and Treasurer, Dr. G. M. HAMMOND, of New York; Councilors, Dr. B. SACHS, of New York, and Dr. WHARTON SINKLER, of Philadelphia.

Amendments to the by-laws and constitution and resolutions were offered, after which the association adjourned, to meet in June, 1887, the date and the place to be determined by the council.

AMERICAN OTOLOGICAL SOCIETY.

Nineteenth Annual Meeting, held at the Pequot House, New London, Conn., Tuesday, July 20, 1886.

The President, Dr. J. S. PROUT, of Brooklyn, in the Chair.

Acute and Chronic Purulent Inflammations of the Middle-ear Tract and their Complications.—A paper with this title was read by Dr. SAMUEL SEXTON, of New York, who said that in no disease of man was a knowledge of regional anatomy more important than in diseases of the middle ear. He gave a *résumé* of the anatomy of the temporal bone, accepting the description of Professor Leidy as the most satisfactory. The symptoms were next referred to. Brain symptoms, such as headache, vertigo, pain, delirium, nausea, and vomiting, might occur in consequence of middle-ear disease without lesion of the cerebral structure. The prognosis of purulent inflammation of the middle ear when non-meddlesome treatment was adopted, as regarded both life and the preservation of hearing, was favorable. Out of twenty thousand cases of ear disease, where the patient had been seen at the beginning of the attack, no fatal case had occurred. In cases which had come under observation after severe symptoms had appeared, twelve deaths had occurred. In regard to treatment, the speaker recommended incision of the drum-head. Trephining of the mastoid process had been recommended by some authorities. He considered the indications which had been regarded as calling for the application of the trephine, and held that they were insufficient. From his experience, he had been led to believe that drainage could be best maintained through the natural channel. The speaker also described a new operation for the radical cure of chronic purulent inflammation of the middle-ear tract. Since describing a form of chronic purulent inflammation of the attic, in a paper read before the society last year, it had occurred to him that something might be done with these cases by means of an operation. It seemed especially desirable to cure these cases, when the ear remained simply a reservoir for purulent matter, liable at all times to infect the system. It had been found that in the greater number of such cases the remaining portion of the conducting mechanism no longer served to aid in the transmission of sound, but acted rather as an obstruction to drainage. He had observed that in a number of cases where the transmitting mechanism had been lost a spontaneous cure had followed, and it had occurred to him that the curative action of nature might be imitated with advantage. Where drainage from the attic and antrum was interrupted, a cure could only be assured by an operation permanently clearing the passage outward from the tympanum. Last year the operation had been tried in a long-standing case of otorrhœa due to chronic purulent inflammation of the attic. In order to avoid the danger of using an ordinary lamp in connection with the administration of ether, an electric light had been used. The operation had since then been fully performed in several cases. The first step of the procedure was to separate the membrana flaccida from the edge of the auditory plate and to remove any portion of the membrana vibrans adherent to the auditory ring. If the malleus and incus remained *in situ*, it was well to divide the tendon of the tensor tympani muscle when present, where it left the handle just behind the short process and below the chorda tympani. The chorda tympani, when remaining, was then divided where it entered the tympanum at the pyramid, and also at its exit into the canal of Huguier. The long process of the malleus, being also received into the glenoid fissure by means of this short oblique canal, along with the chorda, might be more or less detached at the same time. The detached tissues and ossicles should then be removed with the forceps. It would frequently be found that the incus, having been displaced, still remained. It might be removed with the attic scraper, which was to be introduced from below and passed up along the inner wall of the tympanum, when the distal extremity might be carried over the incus or malleus, if the latter bone remained, and by traction the ossicles could be detached. Polypoid masses, granulation tissue, and the products of inflammation might then be removed with the cutting curette or cutting forceps, and the parts dressed with a four-per-cent. solution of cocaine to relieve pain. There was usually free bleeding during the operation, often sufficient to protract it and increase its difficulties. The drum should be kept well cleansed and light dressings of boric acid applied until healing took place. The salicylic-acid powder might be applied as freely as could be borne. In some cases this was irritating at first, but tolerance was soon established. It might then be kept up until the parts ceased to discharge. In the cure resulting from this treatment, a dermic transformation of the tympanum took place, but mucus might occasionally gain admission from the Eustachian tube during recurrent head catarrh, or on blowing the nose. This should be frequently removed with cotton-wool, and, if necessary, the drying applications renewed for a time. Where the incudo-stapedial connection remained, he would not hesitate to perform this operation unless a very considerable portion of the membrana vibrans was present. The instruments employed and some of the diseased ossicles removed were exhibited. Dr. Sexton further remarked that he had never had any difficulty in obtaining drainage in cases of periostitis externa by a free incision with a small tenotomy knife.

Dr. C. R. Agnew, of New York, said that, where the inflammation had come to involve the mastoid cells, he thought that some portion of the external wall of the mastoid should be removed. The trephine did not expose a sufficient area of the cancellated tissue of the mastoid. He did not see how the new operation which had been described would be of service in these cases.

Dr. Sexton said that the new operation was recommended only in chronic cases.

Dr. H. Knapp, of New York, said that the upper tympanic pneumatic cells resembled, to a certain degree, the frontal sinuses. These had a direct natural drainage through the infundibulum into the nose. When this was closed by disease, the lateral part of the sinus over the orbit dilated, and the cavity was more easily reached, and more effective drainage was obtained by opening the sinus from the orbit. In a like manner easier and more effective drainage of the supra-tympanic cells was obtained in most cases by opening the mastoid cells with which they communicated.

Painless and only slightly Painful Ulceration of the Membrana Tympani, probably of a Tubercular Nature.—Dr. A. H. Buck, of New York, read a paper on this subject, [It will be published hereafter.]

Dr. E. Gruening, of New York, said that he had seen a number of cases in which he had inferred that the ulceration of the drum-head was due to tuberculosis. He distinctly recalled three cases. In one case, that of a young man, only one ear was affected. The opening was in the inferior posterior quadrant of the drum-head. There was very little purulent discharge. There were two openings, showing that this was not the result of perforation from accumulation. It appeared to be a melting-down process. In another case there were multiple openings, so that the membrane appeared to be honey-combed. There were also openings in the membrana tympani proper. These cases improved under treatment, but the openings remained.

Dr. Agnew said that he had seen a number of cases in which he had supposed that the origin was tuberculosis. In a considerable number of these cases the main lesion had been in the drum-head below the extremity of the handle of the malleus. He recalled the case of a young man who had trouble at the apex of both lungs when he came under observation. He stated that a short time previous he had begun to have slight ringing and a sense of dullness in the ear, that this had gone on for two or three days, and then, when blowing his nose, he found that he whistled through his ear. In the ear complained of an opening was found looking as though it had been removed by a punch. The opening was elliptical. Within a few days the same thing occurred in the other ear.

Dr. J. A. Andrews, of New York, said that, although he had examined a large number of cases of middle-ear trouble occurring in phthisis, and some with a great deal of care, he had never found the *Bacillus tuberculosis.*

Dr. Buck had not looked for the bacilli: but, even if they were not found, tuberculosis should not be excluded. He had seen cases like those described by Dr. Gruening, but he had not seen them in the early stages, and had therefore not considered them in his paper, as there was a possibility that they were due to previous ear disease.

Dr. J. Orne Green, of Boston, said that where he found this destruction coming on without pain and without discharge he at once suspected a tubercular diathesis, and he generally found a history of it. He also agreed with the speaker that only the very mildest measures could be used. Strong applications made the trouble worse. Twice in cases of advanced tuberculosis he had seen, on examining the drum-membrane, little white glistening points of about the size of a pin-head, not secreting at all, and in one case with no congestion. In both cases the spots disappeared in a few days, and within twenty-four hours there was a little clean punched-out opening in the drum membrane. This occurred without any discharge. It seemed to him that he was dealing with isolated tubercles in the tissue of the drum membrane. One of these patients died a few months after from the general disease.

Certain Technical Details relating to Perforation of the Mastoid Process and to the After-treatment.—A paper with this title was read by Dr. Buck. [It will be published hereafter.]

Dr. Green had used the drill almost entirely. He preferred to make a small opening at first, and he was then guided by what he found. Some cases required a large opening, and in such cases the gouge and chisel would come into play. In the majority of cases a small opening was sufficient. In some of these cases the use of the dental engine was very applicable. He had a modification of the engine which could be screwed to a table; it was turned by a handle and any one could furnish the power. Used in this way, he had found the engine of great service. The burrs could be used with the greatest delicacy. In the cases in which he had operated he had put in a drainage-tube and kept it in as long as possible.

Dr. Knapp said that with the chisel the condition of the tissue which was being cut could be observed at every step. It gave a perfectly smooth surface, rendering it easier to clease the wound. It was also very easy to manage the chisel.

Dr. H. D. Noyes, of New York, said that there was much less danger in the use of the chisel than of the drill. There were often great differences in the anatomical relations of the parts. With the drill there was danger of perforating the wall of the sinus or of some important vein. With the chisel or the gouge the parts could be explored layer by layer, and their situation ascertained. This was a strong argument in favor of this instrument.

Dr. Andrews said that in his operations he had always used the chisel. He believed that it was the better instrument and could be used with more caution than the drill. He always made a large opening, for he believed that a collection of pus should always be given free vent.

Dr. Gruening had opened the mastoid process seventy-seven times. At first he had used the drill, and in acute cases the results were all that could be desired. The drill was, however, not applicable to all cases, and he had since used the chisel.

Dr. Buck said that from the direction which the discussion had taken it might appear that he was in antagonism with the chisel. He was not, in those cases where a large surface of bone was to be removed. He had omitted the consideration of those cases from his paper. Where a large mass was to be removed, it could not be done with the drill. The two instruments could not come into conflict.

A Congress of American Physicians and Surgeons.—A communication with reference to the organization of a Congress of American Physicians and Surgeons was presented and referred to a committee consisting of Dr. C. R. Agnew, Dr. H. Knapp, and Dr. John Green to consider and report at the evening session.

Fatal Termination of a Case of Sclerosing Mastoiditis after Chiseling of the Bone.—Dr. Knapp reported a case occurring in a man, aged fifty, who had had extensive suppuration in both ears after scarlet fever in childhood. The right ear became totally deaf, and the left, which was very hard of hearing, became deaf (hearing reduced to a quantitative perception of sound) by a recent attack of dizziness. Dr. Knapp found both tympanic membranes absent, the cavities sclerosed in both, pale in the right, but congested in the left ear. Behind the left ear was found a cavity fully an inch deep, lined with immovable skin, the result of former exfoliation of bone. Three weeks later facial paralysis on the left side occurred. It disappeared in two weeks, under steaming and large doses of iodide of potassium. Two weeks later the patient suffered with constant, intense headache and nausea. The mastoid was opened to the depth of half an inch by chiseling. The bone was compact, and in its deep portion very vascular. During the first two days the patient was sleepy; he could not be aroused on the third, and died comatose on the fifth. No autopsy was allowed. Death was due to traumatic meningitis.

In regard to opening the bone in sclerosing mastoiditis, the prognosis was good when the sclerosis was the result of catarrhal or plastic inflammation, but bad when it was the consequence of old caries or necrosis. There were cases on the border line, and, even when the prognosis was bad, the indications for operation might be strong. The operation would rescue a certain number in the otherwise fatal cases.

Abscess of the Mastoid Cells where the Chief Indication for Operation was Elevation of Temperature.—The history of a case was related by Dr. O. D. Pomeroy, of New York. A. S., aged twenty years, fairly robust, had a violent attack of otitis of the right ear which came on January 30, 1886. The following morning there was free discharge. On February 1st he entered the hospital, when a large perforation was found; a poultice and warm douches were ordered. By February 4th the membrane looked almost normal. There was some pain in the occiput and a temperature of 103·6°. Ten grains of quinine with twenty grains of iodide of potassium, to be repeated in three hours, were ordered. This was followed by a reduction of two degrees in the temperature. The following day the temperature again went up and it was apparent that a purulent process was going on. There was no swelling over the mastoid, and the pain was no greater than might be expected from a neuralgic condition. After consultation, it was decided to open the mastoid process. A drill was introduced, and from four to six drops of pus were evacuated. After the operation the patient continued to improve until he was discharged cured.

Dr. J. A. Lippincott, of Pittsburgh, said that in connection with Dr. Knapp's case he would like to report a recent case in which an operation had resulted in failure. Something over two years ago he had operated on a patient with sclerosing mastoiditis who had been suffering intense pain for twelve months, which did not yield to alterative and tonic treatment. After the operation the patient remained well for thirteen months. The pain then returned, and continued in spite of all treatment. Last March a second operation was performed, and a larger opening with the drill made. No benefit was produced.

Dr. Knapp said that he would like to state that in the cases which he had reported where benefit followed the chiseling open of a sclerosed mastoid, the patients had remained well.

Chronic Purulent Inflammation of the Attic of the Tympanum, with Perforation of the Membrana Flaccida, treated with Peroxide of Hydrogen.—The histories of two cases were related by Dr. Charles H. Burnett, of Philadelphia. In the first case no application had had the same good effect as the peroxide of hydrogen. Every other medicament had seemed to irritate rather than heal the inflamed mucous membrane. In the second case the discharge, which had been very chronic, was promptly checked by the use of the peroxide of hydrogen. The chemical formula of this drug was H_2O_2, and by its affinity for albuminous matters, especially those of pus, it sought every particle of this matter in a cavity like the middle ear, and thoroughly cleansed the parts. The union with pus was shown by a copious foam, which boiled out of the external ear. When the foaming ceased and the peroxide returned clear, the diseased cavity had been thoroughly cleansed. In many cases this seemed sufficient to effect a cure. Where there was a perforation in the membrana flaccida, the application was made by means of the tympanic syringe, the long and slender nozzle of which was introduced through the perforation at the attic of the tympanum. The peroxide was used undiluted.

In the Physiology of Hearing is there an Overlapping of each Auditory Field as in Binocular Vision? was the title of a paper by Dr. William S. Little, of Philadelphia, who said that cases of one-sided deafness afforded the opportunity of mapping out the auditory field for one ear, and it was found, with the watch at two feet from the ear, that the tick could be heard about ten or fifteen degrees across the median line of the head. This gave more scope to hear sounds produced on the side of the head opposite the healthy ear. The tuning-fork was not heard even up to the median line on the side of the ear tested. The watch had been used in making the observations. If the field of one ear reached beyond the median line to about ten degrees, we had, when both ears were normal, an overlapping of each field to the extent of fully ten degrees on either side of the median line in front, above, and behind the head. Each ear heard sounds in this area of twenty degrees. Outside of this area each ear heard singly. By means of this, there was no need to turn each ear toward the source of sounds which reached the individual; the direction of sound was best found in this way for safety in walking and maintaining the erect position. Sudden loss of hearing on one side put the sufferer to great annoyance, as the ability to determine the direction of sounds was, in a measure, lost, the patient often looking in the wrong place when called. It was fully as perplexing as, if not more so than, in a case of sudden loss of sight in one eye, making seeing dependent on one organ of vision. The attempt to restore hearing should be directed not only to obtaining hearing in a line directly in front of the ear, but also to increasing the area of hearing in the affected ear, or in both affected ears, till it reached, if possible, the coalescence seen in normal ears.

The proposition with reference to the organization of a congress of American physicians and surgeons was discussed, and a committee of conference was appointed, consisting of Dr. C. R. Agnew and Dr. H. Knapp, of New York, Dr. John Green, of St. Louis, Dr. W. H. Carmalt, of New Haven, and Dr. George Strawbridge, of Philadelphia.

Officers for the Ensuing Year were announced as follows: President, Dr. J. S. Prout, of Brooklyn; vice-president, Dr. Samuel Sexton, of New York; secretary and treasurer, Dr. J. J. B. Vermyne, of New Bedford, Mass.; committee on membership, Dr. Gorham Bacon, Dr. W. S. Little, and Dr. E. W. Bartlett.

The following gentlemen were elected to membership: Dr. J. B. Emerson, Dr. J. O. Tansley, and Dr. Huntington Richards, of New York; Dr. Henry L. Morse, of Boston; Dr. J. L. Minor, of Memphis, Tenn.; and Dr. T. Y. Sutphen, of Newark, N. J.

Reports on the Progress of Medicine.

GYNÆCOLOGY.

By Henry C. Coe, M. D., M. R. C. S., L. R. C. P.

The Removal of Diseased Portions of the Ovary.—Professor Schroeder ("Zeitschrift für Geburtshülfe u. Gynäkologie," xi, 2, 1885) reports several cases in which he has excised wedge-shaped pieces from diseased ovaries, leaving the healthy portion of the gland intact. The edges of the cut surface are approximated by means of fine sutures, the idea being to preserve the function of ovulation and the possible chance of pregnancy. The operations have as yet been too few to allow of any positive deductions with regard to their ultimate result. In two instances menstruation recurred as usual, but the symptom of dysmenorrhœa was not relieved.

The Continuous Catgut Suture in Plastic Operations.—The same writer (*Ibid.*, xii, 1886) reports twenty-five cases of perineorrhaphy in which the wounds were closed with continuous sutures of catgut (preserved in oil of juniper). Perfect union resulted in all but one case. The advantages alleged for this suture are: 1. It can be rapidly inserted, thus securing immediate approximation of the raw surfaces and consequent arrest of hæmorrhage. 2. Only two knots are tied: one at the beginning and one at the end of the operation. Certain precautions are necessary after the use of catgut; the patient must lie in bed for three weeks, receiving only a small amount of food during the first five or six days, and great care must be exercised in moving the bowels. A rectal tube should be left in constantly, so as to avoid the straining of the sutures consequent upon the accumulation of gas.

The Avoidance of Fistulæ in the Track of the Sutures in Plastic Operations upon the Recto-vaginal Septum.—Lauenstein ("Centralblatt für Gynäkologie," Jan. 23, 1886) contributes a short article on this subject, based upon four cases of laceration of the perinæum. He lays considerable stress upon the use of the continuous catgut suture, when buried deeply beneath the denuded surface, referring with approval to a former paper by Werth.

Hydrastis Canadensis in the Treatment of Uterine Hæmorrhage.—Mendes de Leon ("Archiv für Gynäkologie," xxvi, 1) reports forty cases of menorrhagia in which the hæmorrhage was diminished under the continued administration of this drug. Nervous as well as digestive disturbances were noted in two instances; in one case there was mild delirium, with temporary loss of consciousness. The drug was given in doses of from fifteen to twenty drops of the fluid extract, four times daily, beginning full two weeks before the menstrual period; in some cases it was administered continuously. Hydrastis is supposed to act directly upon the muscular coats of the vessels, producing contraction of the same, and consequent lessening of the blood-supply.

The Treatment of Pelvic Hæmatocele by Galvano-puncture.—Apostoli and Doléris (*Ibid.*; "Zeitschrift für Therapie," 1885, No. 18) recommend this treatment, their *modus operandi* being as follows: Having carefully determined, by means of rectal and vaginal examinations, the precise relations of the tumor, with special reference to the presence of surrounding intestines or large vessels, they plunge into its most prominent part a needle connected with the negative pole, the positive (consisting of a disk of potter's clay) resting upon the abdomen, and pass as strong a current as can be obtained by a Leclanché battery. The séance lasts from five to ten minutes. A fistulous opening is established in the vaginal fornix, which is kept patent; if it closes prematurely, it is reopened by a second application of the needle. After being opened, the sac is to be irrigated twice daily with an antiseptic solution. The only danger in this operation, according to the writers, is the accidental puncture of a large vessel, the hæmorrhage from which is readily arrested by the cautery.

Martin's Operations for Prolapsus Uteri.—A. Martin (*Ibid.*) has reported before the *Gesellschaft für Geburtshülfe u. Gynäkologie zu Berlin* one hundred and ninety-two cases in which he had operated for the cure of prolapsus. In all but six he was obliged to perform an operation upon the cervix; in three instances it was necessary to extirpate the entire uterus. In one hundred and seventy-one cases silk sutures were used, in seventeen the continuous catgut, the latter being highly commended, although it is noted that it is not safe to depend entirely upon these, as secondary hæmorrhage may occur if they are not re-enforced with silk. Relapses occurred only eleven times, and those, too, in old subjects. The operations performed were anterior and posterior kolporrhaphy, with perineorrhaphy. These statistics are highly significant in view of the statements recently urged in favor of Alexander's operation as the only sure method of effecting a perfect cure of prolapsus.

The Discovery of the Gonococcus in the Pus of a Pyo-salpinx.—Westermark, of Stockholm (*Ibid.*; "Hygiea," xlviii, January, 1886), reports a case in which he discovered the specific coccus of gonorrhœa within the contents of a diseased Fallopian tube. This observation, if correct, is of great importance, and is, so far as we know, unique. It proves conclusively, from a pathological standpoint, the direct relation between gonorrhœa and salpingitis. In the case cited, all of the symptoms of specific elytritis and endometritis were present, and the diagnosis of pyo-salpinx was clear before operation. On opening the abdomen, the left tube was found to be distended with pus, which, under the microscope, showed pus-corpuscles, epithelium, and gonococci, the latter being undoubted.

Diabetes in its Relations to the Female Sexual Organs.—Lecorché ("Annales de gynécol.," October, 1885) reports a series of observations made in one hundred and fourteen cases of diabetes in women. Seventy of the patients had reached the climacteric; in these women, however, the manifestations were less severe than in those who were younger. Pruritus vulvæ was noted in about one third of the cases. However, the patients thus afflicted were, almost without exception, above forty years of age; although this symptom frequently led to the correct diagnosis, the disease had generally existed for three or four years before the vulvar irritation appeared. In many instances the endometrium became inflamed, for the same reason, the author thinks, that other mucous surfaces are affected in diabetes. When the disease occurred in young women it caused a diminished menstrual flow and an early menopause; it did not appear to cause premature delivery in cases of pregnancy. There was a slight, but well-marked, diminution in the amount of sugar in the urine immediately after the menstrual period, as well as after parturition; after the puerperal convalescence, however, the amount became increased.

The Operation for Shortening the Round Ligaments.—Doléris ("Nouvelles archives d'obstétrique et de gynécologie," January to May) contributes an elaborate paper upon this subject, introduced by an interesting historical sketch of the operation, which, like many others, is simply a revival of a procedure with which French surgeons were, as much as half a century ago, quite familiar. Having shown that Dr. Alexander can not with any justice profess to be the inventor of a new operation, the writer traces the progress of the same in different countries. The Germans and Italians are almost entirely unfamiliar with the operation, as performed upon the living subject, and French surgeons have, with one or two exceptions, been satisfied with experiments made in the dissecting-room. [Doléris is apparently ignorant of the fact that the operation has been performed at least twenty-five times in New York. His own views upon the question, so far as he has expressed them, have a conservative tendency, although he does not hesitate to criticise the attitude of his *confrères* toward the surgical treatment of uterine displacements. His paper, he says, is not so much a plea in favor of Alexander's (or, as he prefers to term it, Alquié's) operation as it is "la critique et la condamnation de *l'inaction* où l'on se renferme généralement en France."]

A Critical Study of Malignant Tumors of the Ovary.—Poupinel (*Ibid.*, Feb., 1886) reviews two recent papers upon malignant disease of the ovary—one by E. Cohn ("Zeitschrift f. Geburtshülfe u. Gynäkologie," xxii, 1886), and the other (a Paris thesis) by G. Poupinel. The statistics given by the first-mentioned writer are rather curious. Sarcoma of the ovary he regards as extremely rare, having observed but two specimens among six hundred tumors. Primary carcinoma was almost as rare, cancerous degeneration of an ovarian cyst being the usual form in which the disease presented itself. [The reader will be astonished to find that Dr. Cohn has met with malignant disease in one out of every six ovarian tumors examined by him, so that among six hundred cases operated upon by Schroeder he notes the presence of a malignant element in one hundred (!). This unusual proportion is explained by the fact that papillomatous ovarian cysts are classed with sarcomata and carcinomata—a loose and unscientific method, to say the least, since it confounds the clinical and microscopical evidences of malignancy.] Every ovarian enlargement should be removed as soon as it is recognized, "without regard to the size and nature of the tumor," because it may subsequently become malignant. This is rather a unique plea in favor of early ovariotomy. M. Poupinel's deductions are quite as startling; a simple proliferating cyst is, in his opinion, only a variety of epithelioma (!). The reviewer agrees thoroughly with this bold statement, and adds: "In order that secondary tumors may be disseminated from a proliferating cyst, it makes little difference whether the vegetations are limited to the interior of the cyst or are situated upon its outer surface; the *tendency to proliferation* is the only important point." He concludes by stating that he goes a step beyond Cohn, and would advise the prompt removal of ovarian tumors, not because they may undergo malignant degeneration, but because *they are all malignant already*. [We have quoted from this paper rather as an example of medical pessimism than from any desire to disseminate the radical views of the writers.]

New Inventions, etc.

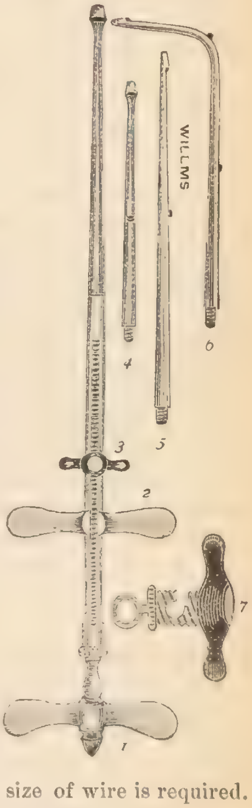
PRESENTATION OF INSTRUMENTS

At the recent meeting of the American Laryngological Association.

Dr. John N. Mackenzie, of Baltimore, presented an **Instrument of Original Design for fracturing the Nasal Septum.** The main objection to the instruments in general use for this purpose is, that they make a very imperfect impression upon the septum; there is not a sufficient amount of leverage in the handles to drive the blades through the cartilage. In the instrument of Dr. Mackenzie the handles are long and heavy, so as to give more power. It will cut through six thicknesses of chamois leather.

Dr. Carl Seiler, of Philadelphia, exhibited a **Section Cutter for making Sections of the Entire Head.** Dr. Seiler said that he had been engaged for some time in topographical studies of the upper air-passages, and had constructed the apparatus exhibited for the purpose of making sections of frozen heads. It was shaped like a "miter-box," the head being clamped in position and sections made with a common hand-saw. It took about four hours to freeze a head in a mixture of ice and salt; the sections were readily made. Specimens of various sections of the human head were also exhibited. He had also made some experiments in making permanent preparations by electro-plating the specimens. He thought that they might be afterward exposed to heat, so as to char the organic matter, which might be removed, and the internal cavity might then be filled with wax.

Dr. J. H. Hartman, of Baltimore, exhibited an **Ecraseur for the Removal of Nasal and Naso-pharyngeal Growths.** The advantages alleged for the instrument were as follows: The method of fixing and attaching the wire, which is firmly held by means of the slot in the screw attachment (Fig. 7), the method of its action rendering slipping of the wire impossible. The easy movement and power exerted by the rotator (Fig. 1), and the different forms and sizes of attachments (Figs. 4, 5, and 6), which can be readily adjusted to meet various cases. No particular size of wire is required. Any size can be used as the necessities of the operation may demand.



New Galvano-cautery Instrument.—Dr. C. E. Sajous, of Philadelphia, presented a handle for galvano-cautery purposes with a device for facilitating the attachment of the cords; the ends of the rheophores are introduced into a cavity, and fastened by a turn of the screw in the end. Another point is that the cords are attached in the middle of the handle, and are therefore more out of the way than when introduced into its extremity. The conductors in the handles are of copper, which offers less resistance to the current than the usual form.

Miscellany.

The French Congress of Surgery.—By the courtesy of the president and the secretary, M. Ollier, of Lyons, and M. Pozzi, of Paris, we have received a circular of invitation to the second session of the congress, to be held in Paris from the 18th to the 24th of October. We regret that the circular did not reach us in time for us to notify our readers of its contents prior to the 15th inst., as it is desired that subscriptions and the conclusions of papers be sent to the secretary before that date. The session will be opened on Monday, October 18th, at 2 P. M., in the great amphitheatre of the École de médecine. Four sessions will be devoted to pre-arranged discussions, and at least three to miscellaneous discussions. The conclusions of any paper relating to the latter must be sent to the secretary-general before the 15th of July, in order to be published in advance of the meeting. Otherwise, the paper can not be read until after the others, and then only if time permits. No paper which is not read can be published. The subjects announced are: 1. "The Nature, Pathogeny, and Treatment of Tetanus." 2. "Nephrotomy and Nephrectomy." 3. "Orthopædic Resections." 4. "Operative Interference in Irreducible Traumatic Luxations." Any doctor of medicine who sends his dues (20 francs) before the 15th of July becomes a member, and is entitled to a copy of the "Transactions." A subscription of 300 francs secures the title of founder, and one of 200 francs that of life member, and each is in commutation of all subsequent annual dues. All communications should be addressed "M. le Dr. S. Pozzi, 10 place Vendôme, Paris."

In a personal note accompanying the circular, M. Pozzi writes: "We should be happy to see all American surgeons in sympathy with our country come to the congress."

The Health of Burlington, Vt.—During the month of June deaths were reported as follows: 1 from phthisis, 1 from cyanosis, 2 from whooping-cough, 1 from bilious fever, 1 from congenital debility, 1 from typhoid fever, 1 from concussion of the brain, 2 from capillary bronchitis, 1 from heart disease, 1 from cancer of the lip, 1 from acute mania, 1 from acute peritonitis, 1 from hereditary syphilis, and 4 from pneumonia. There was one still-birth.

Professor Semmola, of Naples, according to the "Lancet," has been made a Senator of the Kingdom of Italy.

The British Medical Association.—Among the papers announced in the "British Medical Journal" as promised for the forthcoming meeting, we notice one by Dr. T. A. Emmet, of New York, "On certain Mooted Points in Gynæcology," and one by Dr. W. T. Lusk, of New York, entitled, "The Proper Moment for the Performance of Gastrotomy in Abdominal Pregnancy."

THERAPEUTICAL NOTES.

Preparations of Ergot.—Kobert, of Dorpat ("Ctrlbl. f. Gynäk."), gives the results of experiments with the derivatives of this drug, and makes the following deductions: Ergotinic acid possesses no oxytocic properties. Ergotine, in the crystalline form, has no action whatever on the uterus. Cornutin has a direct action on the uterus, causing contractions that are the more violent the further advanced the subject is in pregnancy. Sphacelinic acid exerts a peculiar effect on the uterus, not provoking rhythmical contractions, but a tetanus-like action. Since ergot that has been kept more than a year is absolutely inert, and yet the physician has no means of telling an old specimen from a fresh one, except by the effects, ergot should be abandoned entirely and cornutin substituted for it, for the latter really contains the active principle of *Secale cornutum*, and does not lose its power after being kept for several years. The author thinks cotton root has no value as an oxytocic.

Cornutin as an Oxytocic.—Erhard (*Ibid.*) has observed a decided increase of the uterine contractions from the use of this drug in sixteen out of forty-six cases of labor, that action being "probable" in thirteen others, while in the remaining seventeen it was either "doubtful" or nil. The drug was employed only in cases of defective pains, and generally during the first stage of labor, in doses of one one-hundred-and-twentieth of a grain. It is hardly to be recommended in the first stage, as six of the forty-six children were born asphyxiated, and two of them could not be revived.

Diluted Chloroform Vapor as an Anæsthetic.—M. Paul Bert ("Jour. de méd. de Paris," June 27, 1886) has communicated to the French Academy the results of experiments conducted by Dr. R. Dubois with the purpose of ascertaining if chloroform could not be robbed of its dangers. The experimenter has devised an apparatus by means of which a measured amount of chloroform vapor is diluted with ten times its volume of air. It consists of a metallic cylinder in which a piston moves. By a suitable arrangement of valves, at each ascent of the piston a certain quantity of chloroform vapor is forced into the upper part of the cylinder, mixed with the air, and carried off through a rubber tube to a mask, or inhaler, which fits over the patient's face. The apparatus has been tested with the most satisfactory results in several of the French hospitals.

The Antiseptic Treatment of Whooping-cough.—According to the "Lancet," Dr. Eustace Smith thinks highly of Monti's treatment, in which the child is caused to inhale, four times a day, a spray of carbolic acid (1 to 100) or of benzoate of sodium (1 to 20), and to take internally, every two hours, in milk, a suitable dose of tannate of quinine with benzoate of sodium and sugar. The average duration of the attack under this treatment is only three weeks.

Chlorate of Potassium in the Treatment of Hæmorrhoids.—The "Therapeutic Gazette" recommends rectal injections of a saturated solution of chlorate of potassium containing ten drops of laudanum. The relief experienced is said to be remarkable. The enemata should be given night and morning.

Hydrochlorate of Caffeine as a Local Anæsthetic.—M. Terrier ("Jour. de méd. de Paris") finds that, in ophthalmic surgery at least, the anæsthetic action of caffeine is almost identical with that of cocaine.

The Treatment of Vaginal Catarrh.—De Sinéty is credited by the "Union médicale" with the following formula:

Crystallized phenic acid	15 grains;
Subnitrate of bismuth	1½ drachm;
Glycerin	6 drachms;
Distilled water	3 ounces.

Tampons saturated with this solution are to be inserted in the vagina.

Martineau (*Ibid.*) recommends insufflations of the following powder in chronic cases:

Salicylic acid	1 ounce;
Subacetate of lead	2⅔ ounces;
Powdered gum arabic	2½ drachms.

A Lotion for Alopecia.—Pisicus (*Ibid.*) is credited with the following formula:

Lactic (or citric) acid	8 to 15 grains;
Boric acid	30 to 75 "
Strong alcohol	1 to 1⅓ ounce;
Distilled water	7 ounces.

To be rubbed into the scalp, for three or four minutes at a time, twice daily.

Dioscorea Villosa as a Remedy for Cholera.—In some parts of the country this plant is in high repute as a remedy for painful abdominal affections. Dr. Tandy L. Dix, of Shelbyville, Ky., writes to us as follows: "From my experience with this medicine in the treatment of bilious colic, and the influence which it seems to exert upon the nervous system, I feel warranted in calling the attention of the profession to its use in the treatment of cholera. There is sufficient reason to believe that it will not only relieve the cramps, but it will exert a benign influence upon the nerve-centers and by this means look toward a cure of the disease."

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Original Communications.

SOME
RARE AFFECTIONS OF THE RECTUM AND ANUS.*

By CHARLES B. KELSEY, M. D.

Case I. *Lupus of Ano-vulvar Region.*—The patient was fifty-five years of age and had had five children and several miscarriages, none of them due, however, to syphilis. The most careful inquiry failed to bring out either a syphilitic or a scrofulous history. She seemed in good general health, suffered little, and was able to do a good day's work. Two years before she had suffered from some trouble of the rectum, and said that she was operated upon for piles without relief. She had, in fact, grown steadily worse, and a few months ago was again operated upon for recto-vaginal fistula. This time also she received no benefit. On examination, the rectum and the vagina were found converted into one common cavity. The only remnant of perinæum was a slight bridge of tissue of about the thickness of a quill, running transversely from the lower part of one labium to the other. This, being cut, left a large ulcerated cavity into which both rectum and vagina ended. The sphincters had been entirely destroyed, and the edges of the cavity were surrounded by fleshy masses of hypertrophied skin almost sufficient to conceal the true relations of the parts.

The ulceration, though of great superficial extent, did not present any marked cancerous hardness of the base. The edges were hard and infiltrated, slightly raised, but not undermined, and the ulcerating surface was covered with a sanious discharge, and but little pus. There were no enlarged glands, no constitutional infection or cachexia, and no apparent attempts at cicatrization. Defecation was painless and occurred once a day. Although having no control over the passages, she generally, except in case of diarrhœa, had sufficient premonition of the approach of a passage to enable her to reach the closet in safety.

This is an example of the rare manifestation of lupoid disease occasionally seen in the ano-vulvar region. Although it is rarely seen in the male sex, and generally has its starting point in the female genitals, affecting the rectum secondarily (under which form it was first described by Huguier,† and has since been written upon by others under the title of Esthiomène—Greek, ἐσθίειν, to eat, to gnaw), Allingham, under the head of "Rodent or Lupoid Ulcer," describes two cases of what seem to be the same disease in all essential particulars, occurring in the male, and affecting primarily the anus and rectum. Taylor‡ also refers to a case upon the penis reported by Kaposi.

There are two chief varieties of the disease, the serpiginous and the hypertrophic, though under each of these cases will be found presenting many differences. The former is the same as the disease met with on the face. The latter is only seen on the female genitals, and in it the primary ulceration is attended by great hypertrophy of the adjacent parts, often sufficient in extent to resemble elephantiasis. In my own case, though the destruction of the soft parts was very extensive, sufficient new tissue had been formed to nearly conceal the true relation of the parts by surrounding them with large, firm, pendulous tags of skin and connective tissue.

The affection is not primarily an ulcer, but begins as a tubercle, and usually on the labia majora. The tubercles slowly increase in size and number, ultimately break down and coalesce, and give rise to the characteristic ulcer. The subsequent increase in the size of the ulcer is due to the coalescence of new groups of tubercles. The ulcer is irregular in outline, with a granular base of violet-red color. The edges are but little elevated and are not undermined. There is no induration of the base of the sore; the discharge may be considerable when the surface is large, but is always sanious and never purulent, and is free from any offensive odor. The sore is neither contagious nor inoculable, either on the person bearing it or another. There are no metastases and the glands are not involved. At a greater or less distance from the edge of the ulcer or ulcers (for there may be two or three) there is often the pathognomonic appearance of reddish, hard nodules of tubercular lupus not yet broken down, and separated from the ulcer by healthy skin. Cicatrices are sometimes seen marking attempts at spontaneous cure, and these easily break down and ulcerate again.

The ulceration is often complicated by chronic œdema and infiltration of the adjacent parts of the female genitals, and thus the serpiginous form becomes what is known as the hypertrophic. Large tumors and tags appear on the labia, the carunculæ, the mons, and at the anus. These are bluish or reddish in color, generally with a shining, tense internal surface composed of mucous membrane, and a paler, rougher outer aspect composed of skin. They are formed of skin or mucous membrane on the surface and of hypertrophied connective tissue within. Many smaller sessile tags, from half an inch to an inch in length, are sometimes found as secondary hypertrophies hanging from larger primary ones. The disease never causes sufficient cicatricial contraction to obstruct either the rectum or vagina, though both may be partially occluded by the hypertrophied tissue.

The course of the disease is essentially chronic, and, unless there be severe pain, it may go on and slowly increase for years without affecting the general health or even preventing the patient from doing a hard day's physical labor. In women, where the ulceration is confined chiefly to the vagina and external genitals, no great pain is generally complained of; but where it is located at the verge of the anus it may be exceedingly painful and gradually wear the patient out from suffering alone. Allingham is the only author I have read who seems to have met with this peculiarity, and in three of the four cases he describes particular stress is laid upon this point. All of his cases, however, affected primarily the verge of the anus, and it can easily be understood why the disease should be more painful there than upon the labia or at the ostium vaginæ.

It does not generally reach a fatal termination, at least not till after many years, and then only through some complication. It may perforate the bladder or even the peritonæum, and it may in its last stages be attended by other ulceration, higher up in the rectum or colon, which shall destroy life. Whether this secondary disease higher up the bowel is of the nature of chronic inflammation and degeneration of the intestinal follicles, or is due to a further deposit of lupus, has not been determined.

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* Read before the New York Clinical Society, April 23, 1886.

† "Mém. sur l'esthiomène," "Mém. de l'acad. de méd.," 1849, t. xiv.

‡ "Amer. Gynæcological Trans.," vol. vi, p. 199.

Taylor states (on what authority I do not know) that cases of spontaneous cure have been known.

The disease is peculiar to no age and no condition of life. The youngest child of which record is made is one of twelve years, referred to by Huguier. My own case was fifty-five, and this is about the opposite extreme. By the French authors the affection is almost universally attributed to the scrofulous diathesis, but without any sufficient proof. Others have considered it as an unusual manifestation of the syphilitic taint in an obscure form. Van Buren went so far as to combine the two, and considered it as due to the grafting of the syphilitic poison upon the scrofulous diathesis. There seems, however, to be very little basis to any of these theories. It is in itself a local disease, though, as Taylor suggests, it may be grafted upon a constitutional taint of any sort—cancer, scrofula, or syphilis. In many of the reported cases it is impossible to discover any constitutional taint whatever.

In the matter of diagnosis this ulceration must be distinguished from chancroid, chancre, secondary syphilitic ulcers, epithelioma, and elephantiasis with ulceration; and, though this is sometimes not difficult, at others it can only be done by exclusion. A well-marked case of the hypertrophic variety of long standing can hardly be mistaken for any other affection, except possibly elephantiasis with ulceration. Where, however, the ulcer exists alone, without hypertrophy, the diagnosis will sometimes be found impossible from the mere superficial appearances, and other tests must be resorted to.

From the chancroid it can generally be distinguished by its appearance. The former secretes more pus, may be covered by a grayish pellicle, and the pus is auto-inoculable. The latter secretes only a thin, sanious matter; its base is bright red, and the secretion can not be inoculated.

From the chancre and the later manifestations of syphilis, the diagnosis is best made by anti-syphilitic treatment.

The differences between lupus in this region and epithelioma may be slight to the eye, but in the former there are no metastases, no glandular involvement, and none of the attendant induration of the base and edges, even though the ulcer may have existed for years. The diagnosis may, therefore, be made both by the clinical history and the microscope.

The prognosis depends in great measure upon the extent of the disease and upon the treatment. In twenty-seven cases ten cures are reported, and there is no doubt but that this proportion could be greatly improved by suitable treatment begun before the disease had made too great headway.

The prognosis depends almost entirely upon the treatment. When seen early and treated thoroughly, these cases are curable. When neglected they end fatally, if only by a process of slow exhaustion. The best results from internal medication have followed the use of mercury and iodine combined with bitter tonics; but, when from its location and extent such a course is possible, the ulcer should either be cleanly and totally excised, or else thoroughly destroyed with the actual cautery.

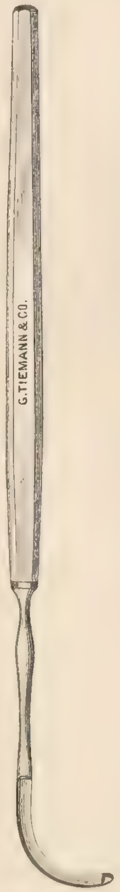
Case II. *Fistula with Double Track.*—The patient was a man thirty-one years of age, who, with the exception of the rectal trouble, had always been in robust health. In December, 1884, he went into hospital and was operated upon, by a surgeon of prominence and ability, for fistula. The after-dressings were made by the nurse, and the patient soon left the hospital, supposing himself cured. Eleven months afterward he was sent to me by Dr. Lewis, of Brooklyn, and he stated that he had never been well since the operation. He complained of great pain in the rectum, chiefly after defecation but not exclusively, of bleeding and discharge, and for these he had been treated by several surgeons without benefit. The skin around the anus was excoriated from the discharge. The track of the first fistula could be seen plainly by the cicatrix of the incision, which was located anteriorly and in front, and was soundly healed. This cicatrix ended, just above the internal sphincter at the commencement of the rectal pouch in front, in an ulcer of the size of a silver quarter of a dollar; the bottom of the ulcer was considerably below the level of the surrounding mucous membrane. The ulcer was carefully and thoroughly probed with a bent probe—the rectum being well opened with a speculum, and the ulcer in full view—but no fistulous track could be detected.

My diagnosis was an ulcer of the rectum resulting from the cut for the fistula, which I supposed had never healed at its upper end, and had been gradually changing from an incision to its present form. A very favorable prognosis was given and treatment was begun, and steadily continued for sixty days without any great benefit. It consisted in regulation of the diet and action of the bowels, and in applications locally of all the things contained in my list likely to cause an ulcer to heal. Twice it was thoroughly cauterized with pure carbolic acid, and daily dressings of iodoform, calomel, and bismuth in alternation were made. The ulcer seemed perfectly healthy, but it never healed, and the man's suffering continued. Several times during this course of treatment I repeated the examination with the probe in search of a deep fistulous track, but never could enter any, nor could any induration indicating its presence be found.

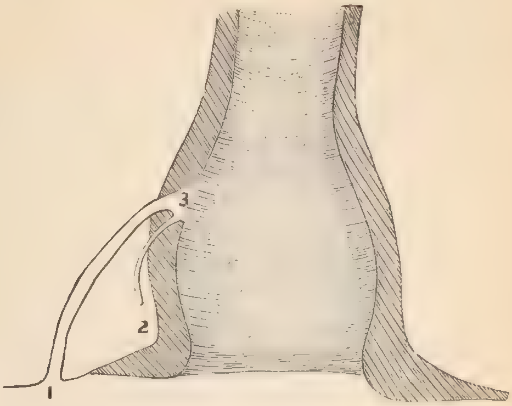
After sixty days I told the patient that it was useless to continue the treatment unless he could go to bed and rest quietly a few weeks on milk diet, and this he consented to do. As preparatory to the healing which I promised him would certainly take place, I used cocaine, and thoroughly scraped the ulcer with the sharp spoon. Sixty-five minims of a four-per-cent. solution, freshly made by Fingerhut, were injected at four points around the circumference of the anus, and after twenty-five minutes the sphincter was partially dilated and the operation done. I could not see that the cocaine had any effect.

The patient was put to bed on absolute milk diet, with a mild laxative at night, and immediately began to improve in his symptoms, the pain and discharge decreasing. After a week another examination was made, and, though there was some improvement in the appearance of the ulcer, I was not at all satisfied that it was about to heal, and I determined to try once more. This time I dilated the sphincter thoroughly and cut deeply across the ulcer with the knife; then I scraped it again with the sharp spoon. The operation was preceded by the injection of forty-five minims of a four-per-cent. solution of cocaine, used as before. The sensibility was tested every two minutes; the second injections, made fifteen minutes after the first, were as painful as the original ones, and the drug was a total failure. I used the same solution two days before with perfect success, and again with equal success on the following day on other patients. Before cutting I had again probed for a fistula without success. The patient was now promised an absolute cure in a very short time. He was again put to bed on milk diet, and after a few days local applications of iodoform and lint wet with carbolized oil were begun. At the end of two weeks he was so much better that I tried to believe he was well. The ulcer had healed except at one point not larger than a split pea; the bleeding, discharge, and pain had almost entirely ceased. He still complained of an occasional pain, however, which he found it hard to locate definitely; and said that each morning there was a little matter on the end of the stool.

On the seventeenth day after the scraping, after laughing at him for not knowing when he was well, I made the usual application of iodoform through the speculum. While the instrument was in position and the parts tense, I passed my finger along the exposed part of the bowel toward the little unhealed point which remained, and was astonished to see that the pressure of my finger as I carried it up from below, pressing carelessly against the bowel as it went, caused a distinct drop of clear, thick pus to appear on the surface of the ulcer, which before was entirely clean. A repetition of the same movement from below upward caused another drop of pus to join the first, and the diagnosis was made. Not more than three or four drops of pus were obtained in all, and further examination failed to show any hardness along the track from which it had come. Knowing perfectly now what I had to deal with, the exact location of its internal orifice, and the general direction of its track, it still took nearly half an hour to get a probe into it. This was finally accomplished by using a very fine silver one bent into the shape of a hook, passing it up and then drawing it back till it caught in the orifice.



The operation was postponed a couple of hours to enable me to purchase the knife shown in the cut, and then, with the assistance of Dr. Humiston, of Cleveland, cocaine was tried for the third time. The solution was fresh and had been used successfully twenty-four hours before. Sixty minims (four per cent.) were injected at four points of the circumference at about the level of the internal sphincter. Careful tests were made every five minutes, and, there being no effect at the end of a quarter of an hour, sixty minims more were used at three points farther out at the margin of the anus. The pain of the hypodermic punctures was in no wise decreased, and at the end of another ten minutes the patient complained of sickness at the stomach, dizziness, dryness of the throat, and began to have an anxious and frightened appearance, saying that the thing had taken hold of his head if not at the other place. Not caring to push the experiment further, I began the operation twenty-seven minutes after the first injections, and completed it with ether, finding no effect from the cocaine as it continued. The probe point of the sickle-shaped knife finally caught in the pocket marked 3 in the figure, and was drawn downward, making an incision about half an inch long. Not being at all sure that the operation was complete, I persisted in probing for another ten minutes, finally entered the knife into the desired point and opened up an old blind internal fistula about an inch in length which ended about half an inch from the skin on the right side (2). The former incision (1) was anterior on the left. This was anterior on the right, the two tracks meeting at an acute angle.



FISTULA WITH DOUBLE TRACK.—1. Original incision; 2. Secondary track; 3. Ulcer remaining.

The cocaine used was tested by Dr. Humiston on his tongue and found to work well, and sixteen days later was used by myself in another operation with perfect success.

No remarks are necessary upon this case. It illustrates very well the trouble which may be caused by a small fistula of the blind internal variety, and is a lesson in careful diagnosis. When I say that the surgeon who first operated is one of deserved eminence, and that all of the gentlemen who treated the case before it came to me are men holding official positions, this point will be better appreciated. For myself, I am obliged to say that after months of treatment the diagnosis was finally due more to accident than design.

CASE III. *Recurrent Adeno-papilloma of the Rectum.*—A lady, sixty-four years of age, had had rectal trouble for five years, and during the last year or two has been operated upon five times for the removal of a growth which seemed to her to fill up the rectum, and caused her such discomfort that she "must have it taken away." The patient was in good general condition, and there had been no deterioration in health. She was still stout and well, there was no protrusion from the anus at stool, no pain, and no discharge. The growth, which had been so frequently removed, had been examined more than once by expert microscopists, and pronounced of non-malignant nature.

On examination, a space on the posterior wall of the rectal pouch well within the internal sphincter, extending about three inches longitudinally and two inches laterally, was found covered with soft, gelatinous polypi. The number of the growths may be roughly estimated at from fifty to one hundred, varying in size from that of a pea to that of a plum. They seemed each to grow from an individual pedicle which was very soft and easily torn off by the finger. The tumors themselves were very soft and jelly-like, having scarcely sufficient body to hold together when seized with the forceps. The mucous membrane from which the polypi sprung seemed healthy; there was no thickening and no hardness of the rectal wall. Some cicatricial contraction had been caused by the frequent use of pure carbolic acid to the diseased surface after the removal of the growths.

Eight months ago I first examined the patient and found the rectum partially filled with the growths as described, though they had been, partially at least, scraped off with the curette only three months before. Wishing to effect a cure if possible, I gave ether, scraped the surface as perfectly as possible, and cauterized it with Paquelin's cautery. The amount of new growth removed would have filled a small tumbler, but it was very fragile, soft, and gelatinous; some pieces were as large as almonds, the rest a mere mass of hypertrophied mucous membrane. This being the sixth operation, but the first by myself, I did it as thoroughly as possible, in the hope that no recurrence might take place.

The patient did not make so easy a recovery from this operation as from the previous curettings, and was in feeble health for some months. The interval, however, between removal and return was considerably longer, and for six months she did not demand another operation. At the end of that time the growth was once more thoroughly scraped off and the base painted with carbolic acid, the patient being in poor condition for a partial exsection of the rectum, which seemed to be the only method of radical cure. The amount removed seemed fully as great as at the last operation, and the surface affected, if anything, more extensive. From this operation the patient made a good recovery, and for three months enjoyed better general health than for some time before.

At the end of that time she again presented herself for operation and the tumors were once more scraped out, this making the eighth time. The disease had changed slightly in gross appearance. The size of the affected surface was the same, but it seemed more thickly covered by the polypi, and these were less distinctly pedunculated and none of them had reached the dimensions usually attained by three or four of them in the same length of time. The part was thoroughly scraped with the sharp spoon.

The following is the report of the microscopic examination of the tumor made five years ago:

> "I find the growth to be an adeno-papilloma. Its surface is covered with thickly set, delicate, rarely branching papillæ which are composed of connective tissue and blood-vessels and are covered by high cylindrical epithelial cells. In the deeper parts are branching tubes lined with cylindrical epithelium. The stroma of the tumor is rich in young cells and highly vascular.
>
> "This tumor is usually ranked as non-malignant, but it seems to lie on the borderland between the benign and malignant growths. It often returns upon removal, but rarely produces metastases. William H. Welch."

This is an exceedingly rare form of rectal disease about which very little has been written. Richet * reports a somewhat similar case in a man aged twenty-one, where he removed from eighty to one hundred soft polypi varying in size from that of a pea to that of a cherry. In his case the hæmorrhage was very profuse; in my own it has never been abundant. Broca has given the name "circumscribed polyadenomata" to the condition, but for his knowledge of it refers only to the case of Richet.

Although the case reported by Richet may have been of the same nature as this one, the history is not sufficiently complete for judgment. It is noted in his case that the bleeding was very severe and led the patient to seek treatment. An operation was done, but the relief was only temporary, and after a time Richet operated again, cauterizing the pedicle of each tumor with the hot iron. This gave immediate relief and the history ends a few weeks after. In my own case the patient seeks relief not because of bleeding, but because the size of the growth gives her a sense of fullness and discomfort in the rectum.*

Case IV. *Pelvic Abscess in a Child.*—A child of five years. Had always been in ordinarily good health, and was first seen by me September 4, 1885, with the following history: Six days before, he began to have fever, pain on defecation and urination, and diarrhœa. These continued steadily for four days, when he had a slight chill, and on the second day following he was examined by Dr. Emerson, who suggested the propriety of a rectal examination. This was made on the same day. I found the child was suffering greatly from difficulty in urination, and that there had been paraphimosis lasting for a short time. The diarrhœa had ceased, and the passages had become solid, but there was still severe rectal pain on defecation, with rectal tenesmus and the frequent passage of mucus. The temperature in the axilla was 101° F. in the morning. Digital examination of the rectum revealed a painful tumor between it and the bladder, hard, of the size of a small egg, and projecting quite prominently into the anterior wall of the bowel at about the seat of the prostate in an adult. The diagnosis of pelvic abscess was made, a favorable prognosis was given on account of its location, and operative interference was delayed in the hope of spontaneous cure. The child was carefully watched for six days. The morning temperature remained at about 101°, and the afternoon at 103°, in the mouth. During this time there were two distinct chills. The pain and frequency of micturition increased steadily, and at one time there was severe pain in the glans penis, lasting from eighteen to twenty-four hours. On the morning of the sixth day from my first examination (the twelfth of the disease) the vesical symptoms grew decidedly more mild, and the tenesmus and pain in the rectum correspondingly severe, indicating that the pus was working toward the latter; and another rectal examination confirmed this by showing a decidedly increased prominence of the tumor in the direction of the rectum. On the following day the abscess burst spontaneously into the rectum, and discharged several ounces of most offensive pus, and the temperature at once fell to normal. There was considerable sharp, spasmodic pain in the pelvis and down the thighs for several weeks after this, and the bowels were loose, but the passages soon ceased to contain anything abnormal.

Four months and a half after the child was again thoroughly examined on account of marked vesical irritation. He had gained in every way, and had no rectal symptoms, but had much difficulty in retaining his water. The most careful bimanual examination, with a finger of one hand in the rectum and the other hand over the pubes, failed to detect any remains of the former inflammatory induration, and simple remedies were ordered. Two months after the vesical irritation was much diminished, and the little patient seemed in a fair way to perfect recovery.

There are several interesting points in this case, and first is the age of the patient. Though I have seen several similar cases in children between the ages of eleven and fifteen, this is the youngest which has come to my notice. Again, it is impossible to tell the cause of the trouble. There had been no local injury, either internal or external, as far as was known, and the child had no constitutional taint. For lack of better explanation, we were forced to suppose that he might have had a slight fall upon the buttocks, or sat too long upon the wet sand of the sea-shore. The combination of symptoms—pain in urination and defecation, fever, and the presence of a painful tumor—rendered the diagnosis easy, and the wisdom of abstaining from operative interference was justified by the result. With an abscess low down in the pelvis as this was, pressing upon the rectum and protruding into it, it was considered that the chances greatly favored a spontaneous opening into the bowel. Nevertheless, there was a risk that it might open somewhere else, as into the bladder, or into both rectum and bladder, establishing thus a communication between the two, and in another similar case I should advise an early puncture and incision. The rapid recovery from the worst symptoms after the discharge of pus and the continuance for weeks of the symptoms pointing to the pressure effects of inflammatory exudation are also quite characteristic.

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* "Traité pratique d'anat. méd.-chirurg.," second edition, 1860, p. 831.

* Since this was written the patient has again been operated upon. There is no change in the general or local condition.

Case V. *Intestinal Obstruction; Nature unknown; Recovery.*—Mrs. S., aged forty, had been suffering from irregular action of the bowels for about one year. Her history during that time had been one of almost constant diarrhœa, with occasional attacks of very severe pain in the left inguinal region. The latter had been sufficient to keep her from sleeping in the horizontal position for days at a time. Twice since the trouble began she had found relief for a time by change of air—once in the mountains and once at the sea-shore. About a month before seeing her she had gone to a sanitarium suffering from both the pain and diarrhœa as usual, and, with the simple diet and general hygienic conditions of the place, had improved greatly. The passages gradually became less frequent, and the localized pain decidedly diminished. Two weeks before I saw her the bowels had ceased to act entirely. For two or three days this had caused no uneasiness; then mild laxatives were administered, followed, as the days went on, with compound cathartic pills, and, finally, by croton-oil, without any effect, except to cause sickness and general discomfort. The long tube was then tried for three successive days. On the first and second it could not be passed. On the third it seemed to pass, and a large quantity of water was thrown up, which immediately returned as it entered. Active treatment was then abandoned, and the patient allowed to recover from the exhaustion and fright which the frequent attempts and failures to induce a passage had caused. At this time I was asked to see her.

The general condition was fair, though the patient was nervous, and both pulse and temperature were slightly elevated. The past history failed to reveal any signs of ulcerative process which might have caused a stricture, and there had never been bloody or slimy discharges. The abdomen was moderately tense, but there was no discoverable tumor and no point of marked tenderness or dullness. Rectal examination was negative and the pouch was entirely free from fæcal matter. Under these circumstances it was deemed best by all parties to await the course of events, and be guided by any changes which might occur, especially in the general condition. The diet was reduced as much as was compatible with nutrition, a gentle laxative pill of aloin, strychnine, and belladonna was given at night, and gentle massage and electricity were used daily over the abdomen, the patient being kept in bed, which indeed she had not left for a week. On the day following she began to experience a change in her general condition, and on the fourth day had a large and natural evacuation without other treatment than has been described.

When first seen, the diagnosis in this case seemed to me to rest between three things—stricture of the large intestine, fæcal impaction, and chronic intussusception. The occurrence of a natural passage on the eighteenth day and the subsequent improvement of the patient would seem to eliminate the idea of stricture and leave us to choose between fæcal obstruction and chronic intussusception. Obstruction by fæces is usually preceded by a history of long-continued and increasing constipation and by the presence of a fæcal tumor. The latter could not be found, and the previous history was that of diarrhœa rather than constipation.

The diagnosis, therefore, seems to be reduced to a chronic intussusception, relieving itself spontaneously with suitable treatment; but about this diagnosis it is almost impossible to speak with certainty. The case, put broadly, is one where the bowels refused to act for eighteen days under any sort of stimulus, croton-oil and the long tube included; and then acted of themselves when all active treatment had been abandoned. What the exact pathological condition may have been it will always be difficult to decide.

The following case presents a striking contrast to the last:

The patient was a young man, twenty-one years of age, who had been sick ten days when I was asked to see him by Dr. Hutcheson, of Rockville Center, L. I. The youth had never been very strong, and the present illness began somewhat suddenly with severe pain in the abdomen. There had been considerable fever, some swelling of the abdomen, with pain and tenderness to the touch, and there had been no movement of the bowels since the commencement of the illness. There was no previous history of intestinal disease, and a rectal examination was negative. The abdomen was tense and swollen, but when I saw him much of the pain, of which he had complained since the disease began, had left him. In the right iliac fossa it was not difficult to detect dullness and hardness, but there was no marked sensitiveness on pressure. The patient was seen by me for the first time on the tenth day of the disease. He was then perfectly conscious, felt much better than at any time since the attack began, was suffering much less pain, and during the few hours preceding the examination there had been a decided fall in pulse and temperature. In other words, the patient was nearing his end, and operative interference was rejected by both Dr. Hutcheson and myself, the diagnosis being perityphlitis and peritonitis. Collapse followed soon after, and he died on the following morning.

Dr. Hutcheson thus describes the autopsy:

"I found the intestine around the head of the colon completely matted together and exceedingly hyperæmic. The mucous membrane of the caput coli presented a honey-combed appearance, was of pultaceous consistence, and bathed with pus. The large intestine was empty; the small intestine contained a large quantity of yellow, milky-looking fluid. There was no collection of pus and no obstruction. The mesenteric glands were enlarged.

"I think the immediate cause of the young man's death was a perforation of the cæcum, which, owing to the bad state of his health, led to suppurative inflammation.

"R. W. Hutcheson."

Case VI. *Pæderasty.*—A man in the middle class of life, the steward of a steamboat, forty-five years of age, fat, round, and flabby, consulted me about an occasional loss of blood and considerable pain during and after defecation. The most careful examination failed to detect any lesion, both anus and rectum seeming perfectly normal. After prolonged questioning, I was about to give up the diagnosis in despair when the patient, seeing my evident perplexity, suggested that perhaps he ought to tell me one thing. It was this: He had practiced masturbation during the early years of his life, but about fifteen years ago he had begun the practice of passive pæderasty, and had continued it steadily ever since. For some time he had noticed that each indulgence was followed by pain and hæmorrhage. What he really wanted to know was whether he had received any physical injury or acquired any venereal disease. He was a married man, but without active sexual power.

There are many points of interest in this case, and I shall call attention to a few of them without any intention of following the subject to its limits or going at all fully into the subject of unnatural sexual appetite. In the first place, the case is a very rare one, and I am glad to be able to say the only one of the class I have ever seen, with one exception. The other one was a negro. I have made many inquiries, and have found no one whose experience is any larger than my own. The absence of any American medical literature on this subject sufficiently proves that the practice can not be sufficiently common in this country to attract attention, though its devotees are provided for by the criminal code. And yet there can be no doubt that it does exist and is worthy of consideration as a cause of disease of the rectum in both men and women. Among the former it will be found chiefly where men are grouped together for a considerable time, and more particularly on board ship. The officers of our navy are perfectly aware of its existence as a thing to be guarded against among the crew on long voyages.

The point to which I wish to call more particular attention is the effect of the habit upon the rectum and anus. The French writers, Tardieu and Martineau, infer the existence of the vice in all classes of patients where they find a dilated sphincter, an effacement of radiating folds of skin, a funnel-shape of the anus, and marks of violence, such as fissures and erosions. As results of the habit, they give incontinence of fæces and gas, abscess, fistula, and ulceration. All of this I believe must be accepted with great caution. While I would not deny that these results may follow, my own case proves that they may be entirely wanting, and most of the writers who have given special attention to this subject incline to the same belief. Kocher, for example, who has had great opportunities for observation in Arabia, puts himself positively on record to this effect. Again, all of the physical signs given by Tardieu may be present, but it would be very unjust and unsafe in this country to infer the existence of an evil vice because of their presence. Every day since I began to investigate this point I have seen cases in which some of the signs given by him as diagnostic were present. I have seen a perfectly infundibular anus produced in a patient with pruritus, at will, by a relaxation of the sphincter. The tonicity of the muscle varies greatly within the limits of health. One patient may be examined with a Sims speculum with very little pain, while the index-finger can scarcely be introduced in another. In one the radiating folds of skin are well marked; in another the skin is comparatively smooth. It may, of course, be said that in many of my cases a careful questioning would bring out a confession of the vice, and the French writers tell us just how to reach that confession. For my own part, I do not believe it, and therefore I do not try it.

The sphincter, from its nature, is intended for sudden and great changes in form (great stretching and subsequent contraction), and these changes are of daily occurrence, and yet cause no permanent relaxation.

While, then, it would seem that the continued indulgence in this practice may leave hardly any traces, or may be marked by the anatomical changes we have enumerated and which are dwelt upon at such length by the French writers, it sometimes happens that grave injury is the result of a single act. In certain medico-legal investigations, especially where the victim, as is often the case, has been a child, the sphincter has been found ruptured and the rectum lacerated, there has been severe hæmorrhage at the time, and subsequently abscess and fistula.

There is no doubt also that venereal diseases may be communicated in this way. In the case of the negro, to which reference has been made, there was an indurated chancre at the side of the anus acquired by this means, and, though such cases are very rare, the same sore has been seen within the bowel. The chancre acquired in this way is much rarer than the chancroid, and gonorrhœal proctitis is rarer still, though apparently conclusive cases of it have been reported.

25 Madison Avenue.

THE PATHOLOGY OF GOUT.*

By WALTER MENDELSON, M. D.

In presenting to you some considerations upon the pathology of gout, I am moved to do so, not because I have anything of my own that is new to offer, but because it has seemed to me profitable to bring, from time to time, the principal points of much-discussed problems before our minds. In the last few years my attention has been especially called to the disease in question, and, as I have had occasion to consult much of the literature upon the subject, I lay before you the main facts which I have collated, with the hope that the labor I have thus spent will be profitable, not only to myself, but to others as well.

Since the time of Scheele, in 1776, it has been known that some connection existed between gout and uric acid, and yet not till Garrod, in 1848, demonstrated the presence of increased quantities of urates in the blood of gouty patients did our knowledge of the relationship of the two begin to assume a definite form. Much precise information has accumulated since then, still it must be owned that the pathogenesis of the disease has, nevertheless, so far eluded exact demonstration.

Before entering into a consideration of the various theories regarding the causal relations of gout to uric acid, I will briefly review the physiology of urea and uric acid and their relationship to each other.

Urea.—In the healthy mammalian economy, urea represents the end-product of albumin change. It is a freely soluble, nitrogenous body, forming 2·5 to 3 per cent. of the urine, or about one half the total amount of solids. The daily quantity voided is about thirty-five grammes. It is probable that its antecedents are, in large part, the products of tissue waste. It may be also that the end-results of intestinal proteid digestion—leucine, tyrosine, glycine, and asparaginic acid—are converted at once into urea in their passage through the liver in those cases where they are present in excess. While all the tissues, including the blood itself, most likely take part in the elaboration of urea, we may infer that the liver is principally concerned in the process, because various alterations in this organ produce changes in the amount which appears in the urine. Thus direct electric stimulation increases this amount, according to Stolnikow, while destructive processes, like phosphorus poisoning, acute yellow atrophy, suppurative hepatitis, cirrhosis, etc., greatly diminish it.

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* Read before the New York Clinical Society, April 23, 1886.

Uric acid, like urea, represents an end-form of proteid metabolism, and, like it, is probably not elaborated in any one organ alone, but by the tissues generally. Certain organs, however, as the liver and spleen, contain it in greater abundance than do others. In the spleen it is found normally in considerable abundance, and in splenic leucocythæmia this amount, as well as that circulating in the blood, is enormously increased, without, however, giving rise to deposits or gouty symptoms of any kind.

Diet influences, within certain narrow limits, the amount produced, *when the same class of animals is considered*—an animal diet increasing it, a vegetable one diminishing it, though even under prolonged vegetable diet it never entirely disappears from the urine.

Relations of Urea to Uric Acid.—Urea contains by far the larger part of the total amount of nitrogen ingested as food, the smaller moiety being eliminated as uric acid, creatinin, hippuric acid, and ammonia compounds. While this fact itself is readily demonstrable, it yet remains to be shown, however, what stages the proteids pass through before they finally emerge as urea. The circumstance that uric acid can be changed to urea by oxidation led Liebig and others to regard uric acid as the necessary precursor of urea, and, while there are facts which seem to support this view, yet others exist which militate too strongly against it to allow of its unqualified acceptance.

In *support* of the defective oxidation theory the following observations may be cited:

In febrile disturbances the normal proportion of uric acid to urea (1 to 45) remains ordinarily unaltered, the two rising and falling together. When, however, a disturbance of respiration, leading to insufficient oxygenation of the blood, occurs, the proportion becomes changed, the uric acid being increased both relatively as well as absolutely (Bartels), while the urea is diminished.

In leucocythæmia, where the oxygen-carrying powers of the blood are much impaired, the relative as well as absolute quantity of uric acid is greatly increased (Bartels, Salkowski).

As speaking *against* the defective oxidation theory, there may be instanced the numerous observations which show that abstinence from non-nitrogenous food never causes *total* disappearance of uric acid from the urine, whereas, as Parkes has remarked, if uric acid were simply insufficiently oxidized urea, all the uric acid should, under these circumstances, disappear.

It is but fair to state that the increase which occurs in leucocythæmia, just alluded to, has been referred by Virchow and Ranke to the accompanying hypertrophy of the spleen, an organ in which even normally much uric acid is found.

It seems to me that these different views regarding the relations of urea and uric acid do not necessarily conflict, but that probably the conditions regulating their interdependence vary with health and disease. It seems a not unreasonable supposition to assume that, in health, of the total amount of uric acid produced, only the smaller part finally appears as urates in the urine, the balance being converted into urea. This supposition receives support from the increase of uric acid which we have just seen occurs in respiratory difficulties. On the other hand, the whole of the urea need not necessarily have been derived from uric acid. It is possible that that uric acid which always appears in the urine may result from the metabolism occurring in particular organs, as cartilages and connective tissues generally, for it is conceivable that these tissues, while having the power of converting their waste products as far as urea, are not able—perhaps on account of their general non-vascular structure—to carry the oxidation still further and so produce urea. I mention cartilage and connective tissue particularly, because, aside from the fact that it is in them that the gouty deposits occur, we have some good experimental grounds for believing them especially concerned in the production of uric acid.

What, now, may be the possible nature of the changes in the relations between the two going on in disease? We have seen that the most striking changes occur where the supply of oxygen is diminished. It is possible that here the absolute as well as the relative increase of the uric acid which occurs is due—not to increased production—but to a larger quantity than usual escaping oxidation into urea. Certainly the concomitant absolute diminution of urea might support this view.

Theories regarding the Causation of Gout.—The principal theories may be ranged under three heads:

1. That which seeks for the cause in an excess of uric acid (the result of increased production or lessened elimination), together with a diminished alkalinity of the blood.
2. That which presupposes a congenital or acquired tendency to faulty metabolism on the part of certain tissues, leading to primary localized necroses, followed by secondary uratic deposits.
3. That which regards gout as the manifestation of a neurosis in which there is a disturbance of that part of the nervous system supposed to preside over metabolism.

I. *Garrod's Theory*, the representative of the first of the three divisions I have made, is, briefly stated, as follows:

Gout is due, primarily, to an excess of urates in the fluids of the body, and, secondarily, to their deposition in the tissues by a precipitation, caused by diminished alkalinity of the blood. The accumulation of urates may be the result of, firstly, *excessive production* from the ingestion of much nitrogenous food combined with sluggish tissue change —"rich man's gout"—or, secondly, from *diminished elimination* owing to renal changes, the want of sufficient oxygen, the influence of lead upon the kidneys, etc.—"poor man's gout." In both cases the condition is generally intensified by a temporary or permanent loss, on the part of the kidneys, of their uric-acid excreting function. Garrod believes that this function may be suspended, or even completely lost, without loss of power to eliminate other waste products. This view of the renal epithelium acting selectively and exercising multiple and independent functions does not seem improbable, since the experiments of Haidenhain and his pupils have shown the kidney to be no mere mechanical filter, but an organ endowed in its different parts with various selective actions.

Infiltration of the tissues with urates results, according to Garrod, from the co-operation of two factors. The first of these is an accumulation of urates in the blood; the second, a diminished alkalinity of the plasma with consequent lessened power to hold urates in solution, leading to precipitation. He states that in chronic gout he has found the alkalinity of the blood so diminished that in some cases it approached neutrality. It is, however, to be regretted that no details are given of the methods employed, nor any figures adduced of the results obtained. Alkalimetry of the blood, owing to the rapid spontaneous change in reaction toward acidity, which occurs normally in the blood soon after it is drawn, is beset with such peculiar difficulties that simple statements with regard to it, unaccompanied by details, must always be received with due reservation.

The Phenomenon of the Paroxysm Garrod likewise refers to the co-operation of two causes: 1. Accumulation of urates in the blood. This gives rise to the premonitory symptoms, such as dyspepsia, cardiac palpitation, irritability of temper, etc. 2. Occurrence of some exciting cause (cold, injury, or the like) leading to deposition with secondary inflammation in some joint. This results, however, in purification of the blood by elimination of the urates into the articular tissues, with consequent restoration of the general health.

The mere accumulation of uric-acid salts in the blood is, as we have already mentioned, in itself incapable of producing gout; lessened alkalinity of the blood must co-exist as well.

The Hepatic Theory.—A certain school looks upon derangements of the hepatic functions as the cause of the accumulation of uric acid in the blood. In considering the subject of urea we saw that the liver normally converted the products of pancreatic digestion, brought to it by the portal vein, into urea, and that, when the liver cells had, to a great extent, been functionally destroyed, there was a diminution of the urea found in the urine, its place being taken by leucine, tyrosine, etc. Now, it is argued, where the liver is "torpid," much of the urea never gets beyond the uric-acid stage, and hence accumulation results. This theory is chiefly based on the amelioration of symptoms which is observed to follow stimulation of the hepatic functions by cholagogue cathartics. It is, however, founded too much on supposition to merit serious consideration. In the first place, it presupposes all urea to have been uric acid at some stage of its formation—for which no proof exists—and, secondly, if the urea were really to a great extent replaced by uric acid, a decrease of the urea in the urine should be evident. This, however, has been shown by Garrod and others not to be the case.

II. Ebstein, whose recent work is a valuable addition to our knowledge of gout, assumes the existence of a *local* excessive production of uric acid, the result of a peculiar metabolic anomaly. He regards the *muscles* and *bones* as the special seat of this anomalous process, and the deposition in the joint cartilages as merely the result of the unusually favorable conditions offered by the naturally retarded circulation of these parts. This morbid tendency he considers as usually congenital, though capable of remaining latent for years. Other similar metabolic anomalies may exist, as, for instance, in those cases where cystin or pyrocatechin is produced, giving rise to cystinuria and pyrocatechinuria.

Unfortunately for the ready acceptance of Ebstein's theory, he has omitted the most important stone in its foundation—namely, the actual demonstration of the presence of uric acid in the muscles of gouty extremities.

His views regarding the cause of deposition in the tissues merit attention; the more because they are based upon experiments. He claims that the true gouty deposit always occurs *within an area of necrotic tissue* surrounded by a zone of secondary inflammation. This condition of things he found to obtain in all the deposits examined by him, and he considers its discovery of great importance, as throwing much light upon the cause of the precipitation of the urates within tissues. He explains the pathogenesis of the gouty lesion as follows:

The neutral urates, in excess in the blood and lymph, when brought to a structure like cartilage, whose slight vascularity permits but a slow interchange between its own intrinsic fluids and those of the capillaries and lymphatics, exert a destructive influence on the tissues by their prolonged contact, which finally leads to localized necroses. Ebstein's experiments show that necrosis of any tissue is accompanied by an acid reaction, and this acidity of the necrotic area changes the neutral to acid urates, which, being insoluble, or comparatively so, are precipitated.

III. *The Neurosal Theory.*—While no modern pathologist would probably undertake, as Cullen did a century ago, to deny the causal connection between gout and uric acid, yet it has forced itself upon the minds of many that, for the ultimate cause of gout, we must look to certain vices of the system, either inherited or acquired, in which, from the disturbance of the proper chemical balance, a faulty metabolism results. The chemical processes of the body are necessarily assumed to be under the influence of the nervous system; nor will this assumption appear in the least unwarranted when we consider that chemical change results from cell action, and that this action is in turn largely determined by nervous energy. A gland, it is true, will continue to exercise its function for a time, even after extirpation; but, on the other hand, we know that its proper functional activity is dependent on special nerves as much almost as on the blood supply. We need only instance in this connection the action of the chorda tympani upon the submaxillary gland.

The existence of an undoubted inborn tendency in certain individuals to gout, quite independent of habits of life, gives a certain support to the neurosal theory. As Cohnheim, who was himself long a sufferer from, and finally a victim to, gout, remarks: "Individuals who have all their lives been noted for their temperate habits may still become subjects to the severest attacks of gout," and, on the other hand, we constantly see indulgences of every kind favorable to the acquisition of the disease, yet remaining ineffectual to produce it.

Those who look upon gout as a neurosis regard the overproduction and consequent deposition of urates as secondary to a primary disturbance of the nervous system, and it seems not improbable that, as our knowledge of physiological chemistry increases, other pathological conditions will be found to exist which are dependent on passing or permanent changes in nerve action.

The points of similarity between the manifestations of gout and those characterizing nervous diseases in general are many and striking. I will enumerate a few of them: 1. The marked hereditary tendency, often traceable through many generations. 2. The effects of psychic influences—such as great mental occupation, rage, fear, disappointment, etc.—in determining a paroxysm. 3. The not infrequent occurrence of somnambulism, or insomnia, or of grinding of the teeth during sleep. 4. The tendency to neuralgia, myalgia, and cramps. 5. The very arthropathies themselves, which we know are of frequent occurrence in various nervous diseases. 6. The influence of barometric changes. 7. The parallelism, often seen between different manifestations of the neurotic tendency in different members of the same family, or in the same individual at different periods of life, which we find existing between gout and diabetes.

The neurosal origin of gout has been and is upheld by many English writers of eminence—as Paget, Liveing, Ord, Meldon, Duckworth, and others—and Ebstein's views, though not explicitly so stated, may be held to support this theory. In the present imperfect state of our knowledge it may be yet too early to declare in favor of any one particular theory, still it seems to me that a combination of the principal views now prevalent is easily possible.

We may begin by supposing an altered manifestation of nerve action; this results either in a disturbance of the uric-acid excreting function of the renal epithelium (Garrod), or in an increased production of uric acid in the muscles and bones (Ebstein), and that deposition occurs either from diminished alkalinity of the blood (Garrod), or from the acid reaction of necrotic tissue (Ebstein), keeping, in the meanwhile, our minds open to the fact that really satisfactory proofs are still entirely lacking to move us to the acceptance of the existence of any of these conditions. We must remember that Garrod's statements regarding the reaction of the blood still lack exact confirmation, and that Ebstein's supposed uric-acid-forming power of muscle and bone is as yet entirely unproved.

A CASE OF
CONGENITAL DEFECT OF THE EPIGLOTTIS,
ILLUSTRATING ITS FUNCTION IN DEGLUTITION.*

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I INVITE the attention of the association to a brief study of the functions of the epiglottis during deglutition, together with the report of an illustrative case where this fibro-cartilage was congenitally defective.

Our inquiry is limited to the one point in the second period of swallowing, which includes the time from the moment the alimentary bolus passes the isthmus of the fauces until it is seized by the œsophagus. In regard to the physiological explanation of the first and third periods of the process of deglutition there seems to be no divergence of opinion, nor indeed is there as to the fact that, in the second period, as soon as the food passes through the anterior pillars of the fauces, or even before it reaches there, the soft palate, through reflex action, is raised by the levator palati from its vertical and depressed position and becomes horizontal, with its superior surface convex, and it thus is made to touch the posterior wall of the pharynx.

This elevation of the soft palate causes a distinct rise of pressure in the nasal chambers. By the contraction of the palato-pharyngeal muscles which lie in the posterior pillars of the fauces, the curved edges of those pillars are made straight and tend to meet in the middle line, the small gap between them being filled up by the uvula. The posterior nares are thus closed while the soft palate forms a concave roof guiding the bolus down the pharynx. The stylo-pharyngeus and palato-pharyngeus contract and bring that part of the pharynx to meet the food as it descends. Meanwhile the arytenoid cartilages and the vocal cords are approximated, the latter being also raised so that they come very near the ventricular bands. Magendie demonstrated that the larynx was tightly closed by muscular action at the instant of deglutition. It is also admitted that the cushion of the epiglottis covers the rima glottidis, while the epiglottis itself is depressed over the larynx. The thyroid cartilage is, by the action of the laryngeal muscles, suddenly raised behind the hyoid bone, and this assists the epiglottis to cover the glottis. The elevation of the larynx is so rapidly made that Boerhaave speaks of it as convulsive. Indeed, to render deglutition perfect, the larynx has to be raised with energy, with the mouth shut and the jaws in close contact. It is possible, especially with fluids, to swallow with mouth open, but it is very difficult and not without danger. The elephant, in consequence of the peculiar formation of his soft palate and larynx, has the privilege of breathing and swallowing at the same time; but with us we must close the larynx during deglutition and temporarily stop respiration.

The palato-glossi which lie in the anterior pillars of the fauces, by contracting, close the door behind the food which has passed them. It is acknowledged that the air-passages, the anterior fauces, the posterior nares, including the

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* Read before the American Laryngological Association at its eighth annual congress.

Eustachian tubes, and the larynx, are all closed at the end of the second stage of deglutition. Deglutition is, as a whole, a reflex act. It can not take place until some stimulus be applied to the mucous membrane of the fauces. The center of this reflex movement lies in the medulla oblongata, higher up than that of respiration, so that swallowing may be arrested while the breathing is unimpeded. Notwithstanding all these facts are admitted, yet there exists great difference of opinion as to whether the epiglottis be essential to the protection of the larynx during the passage of food and drink. This is somewhat remarkable when we bear in mind that this cartilage has been for centuries under direct observation; that eminent physiologists have experimented upon the inferior animals, and the laryngoscope has been employed to gain definite ideas as to this point in physiology. This uncertainty of opinion has been caused by the contradictory results obtained by experiments.

Before relating the case which forms the basis of this paper, and which may contribute somewhat to the elucidation of this physiological inquiry, we shall give briefly the more important experimental researches as well as the pathological conditions of the epiglottis from which conclusions have heretofore been drawn. In ancient times it was almost universally believed that the epiglottis was a valve which completely guarded the entrance of the larynx from the passage of solid and liquid food. Aristotle defended this view against Hippocrates and Plato, who believed that portions of the fluid drank entered the larynx. Targioni, in 1772, reported cases in human subjects in whom the epiglottis was absent and where no inconvenience was experienced in deglutition. The first trustworthy experiments to test the rôle of the epiglottis as a protecting valve to the air-passages were made by Magendie, in 1813. He, having made an incision in the neck of a dog between the thyroid cartilage and the hyoid bone, drew out the entire epiglottis and extirpated it; and he found that the animals, after the operation, continued to swallow liquids and solids without difficulty, the act being very seldom followed by even a temporary cough. These results were obtained, he tells us, about an hour after the removal of the epiglottis. Subsequently, Magendie divided in dogs the superior and inferior laryngeal nerves, thus paralyzing the muscles of the glottis and leaving the epiglottis untouched. From this operation the deglutition of liquids, especially, became difficult, causing an irritative cough. Magendie's conclusion from these experiments was that the closure of the glottis itself protected the larynx, and that the epiglottis had but little to do with it. These conclusions were generally accepted, although pathological cases in the human subject showed that the destruction of the epiglottis caused persistent difficulty in swallowing. This, however, Magendie, Merklen, and Bonnet explained by stating that in these cases the disease and the resulting disability were not confined to the epiglottis, but had extended lower down to the glottis and the surrounding textures. After reading over these original and able experiments of Magendie, I do not wonder that his conclusions should have remained unchallenged for twenty-eight years.

Longet,* in 1841, published his experiments of removing the epiglottis from six dogs. He reported that, if the animals were kept until the parts had completely healed over, cough, to a greater or less extent, followed the deglutition of liquids. This was the case in an animal kept for six months, in one that was killed on the thirtieth day, and in three that were killed on the nineteenth day. Post-mortem examinations showed that the extirpation of the epiglottis in these cases was complete. In one of the animals, killed two days after the operation, which had been able to swallow liquids without coughing, there was found a swelling at the base of the tongue which projected over the larynx, and acted in place of an epiglottis. Longet affirmed that Magendie's excisions had been incomplete and that his tests of the effects were made too soon after the operations. Longet concluded that the epiglottis did play an important part in deglutition, particularly of liquids. He accounts for the safe swallowing of solids by the fact that they slide over the base of the tongue, whereas the drops of fluid flow after deglutition along the base of the tongue and fall necessarily into the vestibule above the glottis, where they are expelled by a violent cough. He states, as the result of his investigations, that, when the glottis is prevented from closure, the epiglottis being intact, the deglutition of fluids is natural. He cites cases † to show that, when the glottis is prevented from closure, the epiglottis being left intact, the deglutition of fluids is not impaired; and experimentally he proved it by holding the glottis open by forceps introduced from below. Here we have two very important facts admitted by Longet, and subsequently by Walton—viz.: that while the epiglottis is intact and the glottis can not close, no difficulty follows; again, it has been shown by pathological cases and experiments that, when the epiglottis is wanting and at the same time the glottis can not close, difficulty in swallowing follows. The only conclusion to be drawn from these facts is that the epiglottis is able to close the larynx, and that it does so when the glottis fails to perform its duty.

Longet's experiments also showed that during the second period of deglutition the closure of the glottis was effected by the inferior constrictor muscles of the pharynx, all the intrinsic muscles of the larynx having been previously paralyzed. This was found to be the case also during vomiting and rumination.

Clinically we know that, even when tumors prevent the glottis from being closed, the epiglottis does protect the larynx. The fact, however, that while the glottis is in its normal condition liquids do not enter the larynx, whether the epiglottis is present or not, shows that the epiglottis under normal conditions is not absolutely necessary to protect the larynx.

It must be remembered that Magendie's and Longet's experiments were conducted before the discovery of the laryngoscope. This deprived their experiments of the exactness and accuracy which they would have had if the base of the epiglottis, and of the glottis with its cartilages, had been investigated by a bright laryngoscopic light.

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* "Archives générales," Paris, 1841, tome xii, page 418; et "Traité de physiologie," Paris, 1861, page 105.

† "Traité de physiologie," page 107.

Garcia in 1855, and afterward Czermak, had no difficulty through the open mouth in observing the slight tension and erection of the epiglottis in singing.

In 1859 Czermak studied, by aid of the laryngoscope, the physiological phenomena of the larynx, and says that when the larynx is raised and the vocal cords approach each other, the inferior part of the epiglottis is lowered and makes a cushion behind, and, that if the elevation continues, this cushion is placed in contact with the summit of the two arytenoid cartilages which are close together, and the orifice between the two ventricular bands is thereby closed. The cartilages of Wrisburg somewhat assist the closure and diminish to some extent the communication which exists at this point, during deglutition, between the pharynx and the region of the glottis. The epiglottic cushion sometimes fills imperfectly the interval between the ventricular bands and the arytenoid cartilages.

In 1865 M. Guinier * presented the French Academy the results of the experiments of Dr. Krishaber. They confirm Longet's views as to the passage of alimentary substances along one of the pharyngeal grooves by the side of the epiglottis, the bolus arriving at the œsophagus at the moment when, by the contraction of the constrictor muscles, the pharynx is shortened and brought in front of the mass.

M. Guinier observed by auto-laryngoscopy, when he performed the act of swallowing slowly and imperfectly, that the action of the epiglottis was not absolutely necessary to protect the larynx during the passage of the alimentary bolus from the pharynx to the œsophagus, and that the passage could be protected by simple closure of the vocal cords; and he further demonstrated that, in gargling, the space above the superior vocal cords was filled, and the liquid, agitated by the air, was allowed to pass slowly from the glottis.

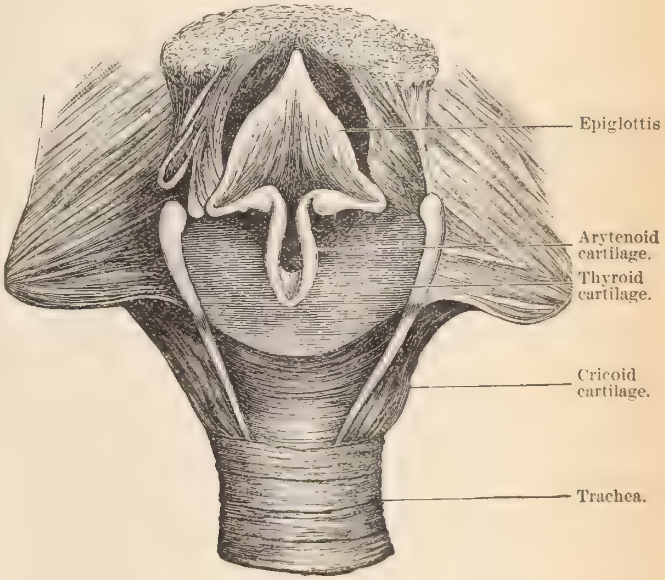
In 1867 M. Moura † published his memoir on the functions of the epiglottis, studied with the laryngoscope. He states that he removed by curved scissors the epiglottis in three dogs, and that deglutition was not interfered with. The laryngoscope confirmed these results.

Moura says that the inferior third of the epiglottis is the only portion which directly contributes to the occlusion of the larynx during deglutition in the human subject. Consequently the two upper thirds can be destroyed or removed without materially interfering with the occlusion of the glottis. Moura reports that he has frequently verified Czermak's observations on himself and on others.

There can be no question but that the upper third of the epiglottis has a slight movement of bending over the glottis downward and backward, caused by the action of muscular fibers found in the thickness of the aryteno-epiglottic folds, but, as seen by Moura in his physiological experiments and vivisections with the aid of the laryngoscope, it does not act as a valve to protect the larynx. According to his results, it is the base of the tongue with the inferior third of the epiglottis connected with the glosso-epiglottic ligaments, together with the lower constrictor muscles, which protects the air-passage. It is thus seen that he differs from Magendie, who taught that this fibro-cartilage was indispensable neither for the safe swallowing of solids, nor of liquids, and from Longet, who taught that in deglutition of liquids it was necessary to protect the larynx. The epiglottis is frequently out of proportion to the size of the rima glottidis. Thus the different varieties of shape of the free portion of the epiglottis—such as the omega, the horse-shoe, the semicircle, the grand circle, and the truncated cone—mostly produced, according to Moura, some modifications in the mode of introduction of solids and drinks in the pharynx. By close examination of some of these, it is apparent from their shape that they can not, at their free edges, properly and of themselves completely cover the rima glottidis. I wish to call attention especially to the horse-shoe and the omega varieties.

Moura * further maintains that we can not draw correct conclusions as to the functions of the epiglottis in man from experiments upon dogs on account of the great difference in the anatomical formation of their larynxes.

He admits that the three dogs upon whom he operated ate and drank without difficulty except immediately after the operation. He also acknowledges that in the dog the epiglottis does act as a valve for the glottis, but that in the human subject it does not. I have here a larynx of a dog to show the difference of its formation from that of man. The epiglottis of the dog has not the same curves as in man; it resembles the superior jaw of young birds just out of their shell; it is loosely joined to the tongue; it can be displaced, pushed down, or carried from right to left with great ease, and its borders, in a state of repose, touch the wall of the pharynx. Moura demonstrated that the bolus of food, in passing over the epiglottis of a dog, upturned it to such an extent that its angle or its superior point became the lower and pushed against the pharynx, and that it regained its normal position after swallowing the alimentary food.



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* "Gazette médicale de Paris," 1865, p. 435.

† "Journal de l'anatomie et de la physiologie," Paris, 1867, page 157.

* *Loc. cit.*

Its walls are like thin paper, so that in vivisection on the dog, to get a clear view of the larynx after pulling the tongue out as far as possible, it is necessary to draw out the epiglottis with a pair of forceps. The closing of the larynx showed also an essential difference. The ventricular bands in the dog come easily and readily in contact and close the cavity of the larynx perfectly. In the human subject the most energetic effort is never able in the normal state to produce the contact of the ventricular bands, the thyro-epiglottic ligament being indispensable to fill the space which separates the two sets of bands at the moment of deglutition. The occlusion of the larynx can be accomplished in the dog by the contact of the ventricular bands, in the human being by the thyro-epiglottic ligament and the inferior third of the epiglottis. We can understand from these facts that, while the destruction or complete extirpation of the epiglottis impedes in no degree the function of deglutition in the dog, yet it may make it very difficult in man. The difference is, that in the dog the whole of the epiglottis is not necessary to the integrity of the function, in the human, however, the low third is necessary. He therefore claims that the experiments of Magendie, Longet, and Walton on dogs, in regard to the functions of the epiglottis, are not conclusive in their application to man.

G. L. Walton,[*] in 1878, published six experiments upon dogs and cats. He excised the upper or valvular part of the epiglottis and found that the entire epiglottis could be removed from those animals with impunity as far as the protection of the air-passages was involved, neither solids nor fluids entering them after the operation. He concluded that Longet, in his care to remove the whole epiglottis, had cut away some of the essential parts of the lips of the glottis, thus preventing its complete closure. Longet had set aside Magendie's experiments under the supposition that his operations were incomplete. To show how Longet could have made the mistake, Walton removed in a dog the entire epiglottis and enough of the lips of the glottis to prevent its perfect closure, with the results of allowing food to enter the larynx at every act of deglutition. Walton did not use the laryngoscope.

Let us now see how far pathological observations confirm or disprove these physiological experiments. Numerous cases have been reported where the epiglottis has been destroyed by disease or by wounds. We all daily meet with cases in which the epiglottis has been destroyed by ulceration, from syphilis, and from tubercular disease. They are frequently the most unpleasant cases to deal with, from the fact that deglutition is not only exquisitely painful, but because the rima glottidis is imperfectly closed, and convulsive coughs result from the swallowing of food of any kind. Many persons have literally died from inanition under these circumstances. Now, through alimentation by means of small œsophageal tubes and the local applications of cocaine, such conditions are made more tolerable. In these cases the writer has frequently found that the inflammatory thickening extended, with ulcerations, to the ary-epiglottidean folds, the false or true vocal cords, or to the arytenoid commissure.

I find in the older writers—such as Haller, Pelletan, Reichel, Sachse, Rudolphi, and Louis—pathological cases mentioned, but their testimony is impaired by their inability to state the condition of the other parts of the laryngeal connections.

Unless the ulcerations are limited to the valvular, the free portion of the epiglottis, they prove nothing as to its function. This is true of wounds of the epiglottis. Unless this fibro-cartilage be the only part injured, it can not be held responsible for the impairment of the function of deglutition.

Magendie[*] stated that he knew two individuals in whom the epiglottis was entirely wanting, and deglutition was performed without any difficulty. He further states that in laryngeal phthisis, where there was destruction of the epiglottis, deglutition was labored and imperfect, because the arytenoid cartilages were destroyed, and the borders of the glottis were ulcerated to such a degree that it was impossible to accurately close the glottis at the moment the substance passed that opening. In the two cases related by Baron Larrey—that of General Murat, a soldier—the whole epiglottis was shot off at the base of the tongue. There was persistent difficulty in deglutition, and also loss of articulated speech. This showed that there was some injury of the vocal cords or of the adductor muscles, below the epiglottis. Walton looked through many reports of cases of diseased larynxes in search of one in which the fact could be clearly shown that the lesion was limited to the epiglottis and where liquids penetrated the larynx. No such case is found in a careful search through reports of Turck, Burow, Mandel, Ryland, Czermak, or Morrell Mackenzie. In a case reported by Czermak,[†] where the painful and difficult deglutition was supposed to be due to the epiglottis, there was extensive ulceration of the glottis. Many cases are found reported by Burow,[‡] Norton,[#] Turck,[‖] and Ravere,[△] where there was partial or complete loss of epiglottis, but no liquid passed into the larynx producing cough. It must be borne in mind that there may be dysphagia and pain in swallowing from soreness of the epiglottis without any entrance of food into the larynx; when this last condition occurs, it is in consequence of the entrance of fluid or solid food. In a case mentioned by Austin Flint, Jr., of entire loss of the epiglottis as shown by the laryngoscope, the patient experienced slight difficulty in swallowing, from the passage of little particles in the larynx. In this case the absence of the epiglottis exposed to a good view the air-passages in deglutition. In a few days the act of deglutition was performed with a certain deliberation, but without difficulty. Deglutition was accomplished most easily in the recumbent posture. One of the most remarkable pathological cases was reported by Dr. Enos ("Amer. Med. Monthly," vol. xv, p. 272), where there had been no difficulty in the swallowing of either solid or liquid food, yet at the post-mortem examination the epiglottis was found entirely destroyed by ulceration; the epiglottidean folds were wanting; the vocal cords and the arytenoid cartilages had been so changed by the disease as to greatly diminish the area of the rima glottidis, and there was aphonia. The difficulty of studying, by the application of the laryngoscope, the process of deglutition is certainly very great. The writer frankly acknowledges that he has found it utterly unsatisfactory. The movements of the first period of deglutition are under the control of the will and are generally involuntary, but the second period involves more complex movements, and, being reflex, are beyond the control of the will. During this process the jaws are closed. It is a very difficult matter to swallow even when the jaws are very slightly separated. It must require great skill in the use of the laryngoscope and great forbearance on the part of the patient. It is questionable whether, the natural process being so much interfered with, it is a correct mode of studying it.

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[*] "Journal of Physiology," vol. i, p. 303.

[*] "Physiologie précis elementaire," 1836.

[†] "Czermak," translated by Gibb, London, p. 57.

[‡] "Laryngoscopical Atlas," 1877.

[#] "Affections of the Throat and Larynx," London, 1857.

[‖] Turck, "Krankheiten des Kehlkopfes."

[△] "Human Physiology," by A. Flint, Jr.

J. W., aged twenty-two, a farmer by occupation, five feet eight inches in height, weighing one hundred and fifty-six pounds, from early in life had had some trouble in swallowing, which appears to have been congenital. He had suffered during infancy with trivial infantile diseases, but had never had any serious disease, either zymotic or inflammatory. His family were aware that he had some trouble in his throat, causing him to strangle readily during his meals; frequently at that time he would get fluids into his larynx and have severe coughing spells, yet if he was deliberate in swallowing he suffered no inconvenience. When in a hurry he felt that the particles of food lodged in his larynx, but he could by a slight effort throw them up into the pharynx, and swallow them. By the aid of the laryngoscope I had a full view of his larynx; the epiglottis was almost entirely wanting; the free border and the cushion were absent. All that was left was a rounded border connected by the glosso-epiglottidean ligaments to the base of the tongue. This looked like a ridge at the extreme end of the tongue. The arytenoid-epiglottidean fold seemed normal, but the ventricular bands were hypertrophied, and the mucous membrane over the vocal cords was much thickened and of a dull color. I made efforts to look into the larynx during deglutition, but did not succeed. I gave him a piece of dry bread, and, after thoroughly masticating it, he swallowed it hurriedly. He motioned to me to inspect his larynx with the laryngoscope. I did so, and found the space above the vocal cords completely filled by the bread. On withdrawing the mirror, the patient, by a slight effort, raised the bread from the larynx and pushed it down the œsophagus. After a very careful inspection I could detect nothing unnatural in any other part of the larynx. The arytenoid commissure, and the cartilages of Wrisburg and Santorina, with their connections, were perfectly normal.

Here was a congenital absence of the epiglottis without other appreciable defect in any other part of the larynx—such a case as Walton searched for in vain among the authorities. There was not only difficulty in swallowing, but passage of the food into the larynx, in consequence solely of a deficient epiglottis. The complete arrest of the food in the glottis by the exact closure of the vocal cords alone prevented the mass from passing into the trachea. In this case, at least, the absence of the epiglottis interfered with the integrity of deglutition. Such was also the condition in the case reported by Flint. Slow, cautious deglutition in both cases enabled the patients to swallow without getting food into the larynx, but in hurried efforts it did enter that organ.

After a careful review of the whole subject as presented in this paper, the author feels justified in making the following conclusions:

1. That the epiglottis is not a valueless appendix to the mechanism of deglutition in the human subject, but that it is one of the agents for protecting the larynx from the entrance of food and drink.

2. That ordinarily the lowest third of the epiglottis is the only portion which is needed for this function.

3. That the other effective agents for the protection of the air-passages are the upward movement of the larynx in front combined with that of the tongue behind, the occlusion of the glottis, the exquisite sensibility of the mucous membrane of the upper glottic space, and exceptionally the lower constrictor muscles of the pharynx.

4. All these different portions of the pharynx are protective of the larynx to a greater or less degree, and it is difficult to assign to any one of them a position of greatest prominence. They ordinarily act together in protecting the larynx from the dangers connected with deglutition. In instances of disability of one or more of them, the others supplement their action.

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PERNICIOUS VOMITING OF PREGNANCY.

By JOHN BLAKE WHITE, M. D.,
PHYSICIAN TO CHARITY HOSPITAL.

I offer as an excuse for reporting a case of this affection, which recently occurred in my practice, the fact that the disease is rarely met with, and the recorded cases are few in number:

Mrs. M., aged twenty-three, multipara, dark hair, complexion dark and of a rich rosy hue, figure small, began to menstruate at about the age of fourteen, and the function continued regular up to the time of her first pregnancy in 1884. When the sixth month of utero-gestation was reached she had a slight "show," followed by slight uterine contractions and constant nausea, vomiting, and retching. The uterus was quieted, but the gastric symptoms continued unabated for ten days. During this period every well-known remedy for the relief of the symptoms was resorted to without any apparent benefit. That which seemed, in any degree, to be of service was carbolic acid, in fraction-drop doses, every half hour or hour *pro re nata*, and an occasional morphine suppository. Champagne was the only beverage she could retain for even a very short time.

When the patient's condition was assuming a very critical aspect, and I was considering the advisability of inducing premature labor, if the urgency of the symptoms did not excite miscarriage, the stomach became gradually more tolerant, and in due time convalescence was established. No further trouble occurred. She reached the full term, and was delivered naturally of a fine female infant. The convalescence after labor was satisfactory in every particular. She nursed the infant until nine months old, when, finding herself again pregnant, she weaned it.

During the period of her second pregnancy her general health was good, except experiencing a little more than ordinary annoyance from morning sickness. During the day she could indulge in out-door exercise, and enjoyed a fair appetite. Her condition continued favorable up to the sixth month of utero-gestation, when she was again sick with distressing nausea and vomiting. as in the preceding pregnancy, but recovered from the attack without any serious consequences, and continued in fair health up to within two weeks of her expected confinement, March 19, 1886. At about the latter part of her pregnancy she informed me that she had experienced considerable anxiety concerning some domestic matters, which seemed to exercise a very depressing influence upon her. I was called on March 12th, as she felt that labor was imminent. On my arrival she stated that she experienced a "very strange feeling" and felt quite sick, but had no uterine pains. She had been suffering from nausea and occasional vomiting for several days, but had not thought it necessary to have my attention. I found, on examination, that her confinement was not to be immediately expected, and, after giving some general directions, advised her to remain in bed until I visited her the following morning. Her nausea and retching had continued throughout the night, and when I saw her the next morning these symptoms had assumed a very serious aspect.

Fœtal life had been perceived during this period, but, as the time wore on with the persistent retching, the fœtal motions gradually became weaker and finally were not felt at all. Nothing gave the least relief from the distressing nausea and retching except morphine hypodermics administered at regular intervals. Some nourishment was given *per rectum*, but seemed to excite retching at times. On March 19th, when the patient's condition appeared to be rapidly becoming critical and the induction of labor seemed to be decidedly the proper course to pursue, natural labor set in and resulted in a still-birth. The waters had broken some time previously, and the amnion completely covered the fœtus like a veil, the birth taking place with the membrane undisturbed, entirely covering the child. The patient had not given any history of the rupture of the membranes prematurely, so the fluid must have very imperceptibly drained away. The third stage was rapidly and satisfactorily accomplished; the womb afterward contracted firmly, and it was hoped that the persistent retching would cease after the seemingly exciting cause had been removed. We were doomed to disappointment, however, as the case did not terminate so satisfactorily. The retching soon returned with increased energy. Fortunately no post-partum hæmorrhage occurred, and the womb, on being examined several hours after confinement, was found still firm. The patient's complexion became ashen-hued and she manifested profound asthenia. Hypodermics of brandy and ammonia were repeatedly administered, but only seemed to exercise a temporary sustaining effect. The vomiting and retching continued, in spite of every means to control these symptoms, until evening, when the hæmorrhagic character of the vomit became manifest. These symptoms persisted until death from asthenia supervened early the following morning, twenty-four hours after confinement.

I could discover no pathological condition to account for the gravity of the symptoms. There was no influence of a septicæmic nature to explain the malignancy of the symptoms, so far as it was possible to determine. The lochial discharge was normal as to odor and quality throughout. There was absolutely no fœtor present. The patient's mental integrity was preserved up to the very last.

The principal symptoms of this affection are threefold: *Persistent vomiting*, *convulsions*, and *vicarious hæmorrhages*. In this case the first and third symptoms were sufficiently pronounced. In all such cases the only procedure at all capable of controlling the vomiting would be the early induction of labor. In this particular case, however, no relief was obtained after the emptying of the uterus, and, from the character of the case throughout, I do not believe that an artificial interference would have had the least effect if it had been resorted to when I was first called to see the patient.

I regret that I can not offer any new theories as to the cause, or anything new and effectual as to the treatment of such a case, but I hope that by reporting this I may excite study and discussion which may prove of value to us all in the future in the care of these particular cases.

941 Madison Avenue.

A CASE OF CHLOROFORM POISONING.

By JOHN H. KILEY, M. D.,
COVINGTON, PA.

Having met with a rare instance of chloroform poisoning ending in recovery, I desire to make it known to the profession through the columns of your valuable journal:

The patient was a young man, twenty-five years of age, of fine physique, robust constitution, and, previous to his recent illness, in apparent good health, except an occasional attack of epilepsy, of which he had had but five.

About 10 P. M., June 27th, he attempted suicide by taking one fluidounce and a half of chloroform. His friends, thinking that he was having one of his former attacks, paid but little attention to him, except to notice that he breathed heavily and frothed at the mouth. At 4 A. M. he awoke, and two hours later he arose and went out, telling his brother he was sick and was going for some medicine. Proceeding to a drug-store, he purchased two ounces and a half more of chloroform, and, returning, when near home, he swallowed the whole quantity. I was called at 7.15, and found the patient lying on the bed insensible, his lips blistered and swollen, his pupils widely dilated, his pulse 84, weak and irregular, and his respiration deep and stertorous. I immediately injected one twelfth of a grain of morphine to relieve irritated nerve centers, and five minims of the fluid extract of digitalis to regulate and strengthen the heart. In a few minutes the pupils contracted, and the respiration became less stertorous, and the pulse slower and stronger. At 7.30 I ordered mustard plasters to the plantar surfaces of the feet, and, the pulse beginning to weaken, bathed the limbs in alcohol, and let him inhale thirty minims of aromatic spirits of ammonia. Under the combined influence of the stimulants, the pulse became strong and the respiration nearly normal.

He remained in this state but a few minutes, when his pulse began to weaken, and the respiration again became stertorous. I then injected five minims of the aromatic spirits of ammonia and gave a slight inhalation of ether. These slightly improved the condition, but at 8.15, as he was growing worse, I injected ten minims of alcohol, which did not revive him, and at 8.30 he vomited a small quantity of greenish fluid, and immediately afterward presented alarming symptoms of asphyxia—pupils widely dilated, alæ nasi distended, pulse weak and fluttering, respiration about 40 and gasping, extremities cold, and nails discolored. I injected twenty-five minims of the aromatic spirits of ammonia, and bathed his chest and extremities with the same. In a few minutes the pulse grew strong, the pupils contracted, and respiration became easier. With the return of vitality there were symptoms of cerebral congestion. The limbs remained cold, the face became flushed, the vessels of the sclerotic were injected, the pulse became full and hard, and the carotids throbbed at each heart-beat, while the jugulars stood out like whipcords. I applied cold, wet compresses to the forehead and temples, and applied dry friction to the limbs, but, the respiration becoming more obstructed, at nine o'clock I performed venesection.

The operation was performed in the usual manner on the median cephalic vein, and, although I made a free incision, but an ounce of blood could be obtained, and that was dark and grumous. Immediately after this procedure I injected ten minims of the ammonia, with slight alleviation of the symptoms.

At 9.30, cerebral symptoms returning, I performed venesection on the other arm, and immediately followed it with an injection of twenty minims of ammonia. This time the blood flowed freely, was lighter colored and watery, and showed but slight tendency to coagulate. After taking away about seven ounces, I closed the wound with compress and bandage. From this time the symptoms improved, the breathing grew easier, the face less flushed, the extremities warm, and the pulse less full and tense. I kept the compresses to the head, the chest being bathed in the aromatic spirits of ammonia, and the limbs in alcohol. When the failing heart indicated more active treatment, I injected the ammonia. Under this treatment he continued to improve.

At 12.30 P. M. my colleague and former preceptor, Dr. L. S. Townsend, arrived. He advised an injection of twenty minims of whisky as often as the heart began to fail. At 1 P. M. I examined the bladder, and, finding it distended, we introduced a No. 7 flexible catheter and drew away a half pint of highly colored urine, having a strong odor of chloroform. I continued the injections of whisky, and also to bathe his chest and extremities with the same as symptoms indicated, the interval increasing as the chloroform became more and more exhaled. At 2.30 P. M. the patient gave the first sign of returning consciousness by slightly flexing one leg; a few minutes later he sighed. Considering our patient out of immediate danger, my colleague departed to attend to other patients.

An injection at 3.30 showed returning sensibility, the patient wincing and turning on his side. I replaced him in the dorsal decubitus, so that the respiration might not be impeded. Soon after this he opened his eyes and then sank into a deep slumber. Another injection at 4 P. M. considerably disturbed but did not arouse him. At 4.20 I gave him another injection; this time he struggled some, and thereafter was too sensitive to allow it. A few minutes later he awoke and called for a drink. I gave him a teaspoonful of milk, but he had gone to sleep and did not swallow it.

At about 5 o'clock he called for another drink. I gave him a tablespoonful of milk, which he swallowed, and went to sleep again. An hour later he became conscious, and remained so. He now complained of great thirst and an intense burning pain in the region of the stomach, and vomited a small amount of greenish fluid containing shreds of mucous membrane. The thirst increasing, he was given every fifteen minutes an ounce of milk, which he eagerly swallowed. At 6.30 he desired to go to stool, and passed a large amount of fæcal matter mixed with blood. At 9 P. M. I ordered him to be given the mucilage of slippery-elm bark as desired, and twenty grains of the subnitrate of bismuth in two ounces of milk every two hours; also the following:

℞ Sulphate of morphine	gr. ij;
Fluid extract of coca	ʒ ij;
Fluid extract of hyoscyamus	ʒ ss.;
Water	℥ iv.

One teaspoonful to be given every half-hour.

I called the next morning at 7 o'clock. The patient had been delirious at intervals during the latter part of the night, and became again so soon after my arrival, requiring three men to keep him on the bed. In a minute he became rational. An examination found the respiration 18, the pulse 80, the tongue thickly coated, and great soreness over the pylorus. I ordered the effect of the solution increased by giving a teaspoonful every twenty minutes until he became quiet, then to give it every half-hour as before. I also ordered a cold, wet compress to be kept on the stomach, the mucilage of quince-seed in addition to the elm as a drink, and the mucilages of arrow-root and tapioca alternately every four hours as food.

I called again at 7.30 P. M. The patient had had two attacks of delirium, lasting about fifteen minutes each, during the forenoon. He had been comfortable all the afternoon. His respiration was 17, and his pulse 76, and he did not complain of any pain. I ordered a continuation of the mucilaginous drinks and the following:

℞ Sulphate of morphine	gr. ij;
Fluid extract of hyoscyamus	ʒ ss.;
Fluid extract of belladonna	gtt. xx;
Water	℥ iij.

One teaspoonful to be given every forty minutes.

I saw him again the next morning and found him much improved; respiration 16, pulse 58. He had had one bad spell during the night. The attendant had disobeyed orders and given him some custard and a cup of tea, which produced nausea and vomiting. In the matters ejected was a piece of stomachal mucous membrane covering four square inches of surface. In addition to the mucilaginous drinks, I ordered the mucilage of acacia and barley-water, applied a belladonna plaster to the back behind the stomach, and ordered a dose of the evening's prescription to be given every hour.

I called to see him again in the evening, and found him much better. His tongue had cleaned somewhat, the coating being removed from the tip and sides, and, as he was very hungry, I gave him a cup of milk with stale bread, this not causing any distress. I ordered him to be given some chicken-broth at midnight, and left the following:

℞ Sulphate of morphine	gr. j;
Fluid extract of hyoscyamus	gtt. xx;
Fluid extract of belladonna	gtt. x;
Essence of peppermint	gtt. v;
Water	℥ ij.

M. One teaspoonful to be given every hour.

The next morning his condition was much improved, and he was well on the road to recovery. He had eaten the leg and thigh of a fowl and some soup for breakfast. He was ordered mutton-soup for dinner and a plain oyster-stew for supper, and the same medicine as before.

On my visit the next morning I found that the patient had been out of doors; he had had a small passage of dark fæcal matter. I warned the attendant against giving solid food, and continued the medication.

The following day my patient appeared nearly as well as usual; at night I left him the following:

℞ Sulphate of morphine	gr. j;
Subnitrate of bismuth	gr. xv;
Pepsin	gr. xxx.

M. Make into five powders and take one after meals.

At the time of this writing, July 5th, my patient has presented no bad symptoms, and may be considered as well.

A NEW TRAPPING-FIXTURE
FOR
SEALING DRAIN-PIPES AND LOCKING OUT SEWER GASES.

By W. D. SCHUYLER, M.D.

(*Concluded from page 119.*)

The need indicated for improved trapping, therefore, calls for a trap with a metallic seal. Many traps affording metallic seals have been devised and tried, but, either because of their too great complexity, cost, trouble of operating, or tendency to cause overflow, or because they have been too readily clogged, they have not been adopted into general use. And, inasmuch as present trapping (represented by the S-trap) is especially defective in connection with *unused fixtures*, therefore the need for a trap providing a metallic seal is most urgent *for the period during which water fixtures are disused.*

As regards a necessary and convenient use of water, and the exclusion of injurious sewer gases in connection therewith, the sanitary indication, then, is for an easily operated metallic seal trap, which shall automatically close the upper end of the drain-pipes simultaneously with the shutting off the supply or drainage water, and keep it hermetically closed until the fixture is again used, and the supply or drainage water is again turned on, however long such periods of disuse may be. And such trap must so operate as not to obstruct necessary drainage and be a cause of overflow.

The fixture herewith introduced, devised by me to supply a need daily experienced in my practice, is especially adapted to and competent to fulfill these indications. It comprises essentially a *plunger* trap-valve, operated (in its casings) automatically, in conjunction and simultaneously with the water-supply valves of the receptacle, in such a manner that it is always open to permit of free drainage when required (while the fixture is in use), but always closed, cutting off the drain-pipe, at all other times (especially while the fixture is disused). This trap-valve, with its connections, operating device, and mode of operating, is illustrated in the accompanying cuts, one of which represents it in connection with a stationary wash-bowl, the other with a water-closet hopper. A (Fig. 1) denotes the valve within its cylindrical casing, closed and resting upon its seat, B, which surrounds and is continuous upward with the upper end of the drain-pipe, C. Just above the seat, B, the valve casing receives the discharge-pipe, D, from the receptacle. At its lower end the valve casing is shown joined to and forming a continuous drainage connection between the discharge- and the drain-pipes. Its upper end is firmly clamped to the slab or platform of the fixture. I denotes the water-supply valve (or valves) of the receptacle. H is its operating lever. G is an extension of H, and F comprises a flexible, detachable connection between G and the valve-stem, E. I also denotes a catch, by means of which the lever, H, may conveniently be kept depressed and a continuous flow of water maintained. J is a locking device, consisting of a threaded nut to be run up (unlocked) before water can be drawn. It also serves as a guide to the valve-stem, E, and, if desired, it may be kept up (unlocked) continually. But, if desirable to insure a compression cut-off seal of the upper end of the drain-pipe with the trap-valve, the lock nut is run down, when, acting on a collar provided on E, it forces A firmly upon its seat, B. While the weight of A is quite sufficient ordinarily to form a gas- and water-tight cut-off at B, yet, when one is about to retire for the night, or close his house for a longer period—a few

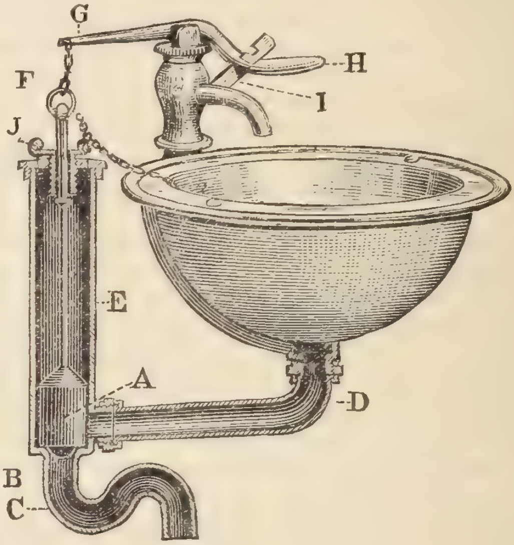

Fig. 1.

months, a year or more—and in connection with fixtures in unused rooms, this lock may be run down and a perfect and durable closure both of the trap and of the water-supply valves assured.

Operation.—It is readily seen that when H is depressed to draw water from the faucet or cock I, G is elevated, and through F and E drags the trap-valve A upward. As long as H is held depressed by the hand or by the catch, A is kept elevated and an unobstructed drainage from the receptacle through the discharge- and drain-pipes provided; but, when H is released and the water supply is shut off, A again falls upon its seat and forms the drain-pipe cut-off desired. It may be remarked here that when A is forced upon its seat by the lock, J, the *cut-off* which can be effected thereby is quite equal to one attainable by cutting out a section of the drain-pipe and sealing its cut ends. As a device for assuring a perfect closure of the trap-valve this simple, easily operated, and reliable locking attachment should prove of practical utility.

It is not intended that this trap and locking fixture shall wholly supersede other fixtures of approved worth, but that it shall be used where practicable in conjunction with them. It is very advantageously combined with the S-trap, and such combination forms a complete trapping provision, the S-trap being a protection while water is being drawn and the plunger valve is open; and the latter, on account of its immediate closure when the supply water is shut off, and its continued closure until it is again turned on, being a thorough protection at all other times. By the action of the latter also the defects of the former are provided for, which is an additional reason for such combination. Practically such combination is easily made and without additional space. When this cut-off trap-valve is applied to the drain-pipe of a butler's sink it is operated in connection with a horizontally turning faucet; and, when applied to a water-closet discharge and soil-pipe, an overflow device is combined with it.

It is seldom that the wash-water continues to flow from a closet cistern sufficiently long to fill a hopper and cause an overflow; but, inasmuch as when the soil discharge-pipe is stopped as effectually as this plunger, especially when locked, stops it, and water might continue to flow, an overflow device is provisionally required.

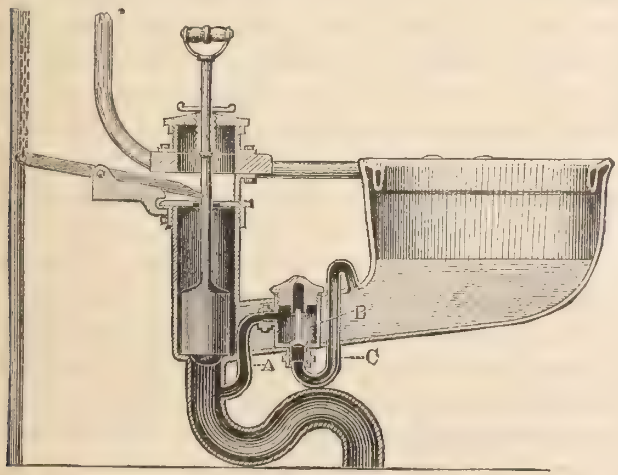

Fig. 2.

Fig. 2 represents a water-closet hopper with the required overflow attachment. C, in this figure, is an overflow pipe connected to the discharge-pipe above the plunger valve-seat. It is S-shaped, extends first upward then downward, and finally upward again, and terminates in the lower surface of an overflow valve-box, B. This valve-box, B, contains a check-valve opening upward, and above the valve-seat it gives off a discharge-pipe, A, which terminates again by its lower end in the drain-pipes below the level of the cut-off trap-valve.

Operation of the Overflow.—Water collecting in this hopper and attaining the necessary elevation enters the upper end of the overflow-pipe, C, rises upward in it, passes over its upper bend, fills the lower bend, and, pressing upward, opens the valve in B, and escapes above it into the drain- or soil-pipe through the discharge-pipe, A. Owing to the arrangement of this overflow and the action of the check-valve in B, while water coming from above readily opens the valve and escapes downward, gases or regurgitant water rising from below strike on its upper surface, close it, and are prevented from passing farther. Therefore, while this device is an adequate provision against overflow, it also forms a reliable trap against the ascent and escape of either gases or water occurring in the opposite direction.

With regard to the utility and assurance offered by this trapping device a general statement may be made: If the drainage-pipes of a house are perfect from the commencement of the basement drain at the sewers to their upper termination—namely, of good material and well jointed so that they will not leak, and their upper, otherwise open, ends are trapped with it in combination as stated—such houses may be *assured*, so far as sewer gases are concerned, as *sanitarily plumbed;* but without this fixture for hermetically and durably closing the upper end of the drainage system, notwithstanding every conceivable provision for ventilation is afforded in addition to ordinary trappings, *such undoubted sanitary plumbing can not be assured.*

Furthermore, besides the efficient and assured trap-action that may be secured by this fixture, another result of great sanitary importance may be attained through its use, namely, *the cleansing of soil- and drain-pipes.*

There is no fixture required and in use in civilized life that becomes so horribly offensive and is so thoroughly the source of poisonous gases as the soil-pipes of our houses. As we have seen, the nature of the discharge into them, their continuance, the putrefactive changes they undergo, and our inability heretofore to properly cleanse them, render soil-pipes a source of constantly developing malaria, which more or less continually escapes inward.

By a general and forcible closure of the upper ends of the otherwise open drain- and soil-pipes throughout the house with this locking trap-valve, and with a hand-valve provided for the purpose, to close the basement drain just outside of the house, the entire drain-pipe system of the house may be converted into a vessel or *cul-de-sac*, which can be readily filled with water from the faucet, beginning at the bottom and going upward, and its contents thoroughly soaked and washed out, and the pipes at the same time *disinfected.*

Regular cleansing of the house drainage may be easily accomplished in this manner as often as desired. And when the question of house malaria comes up as a cause of sickness, or that of leaky pipes is broached, their determination may be readily settled by testing the pipes in this manner. This single result, provided for by the application of this trap, should entitle it to the favor of all judicious and careful householders. As a trapping device, however, for protecting the house atmosphere from putrescent emanation and poisonous sewer gases, and thereby *for the prevention of avoidable diseases*, this fixture deserves most careful consideration and a general adoption.

Book Notices.

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The Relation of the State and the Medical Profession. An Address delivered, June 30, 1886, before the Alumni Association of the Department of Medicine and Surgery of the University of Michigan. By Charles J. Lundy, A. M., M. D., etc. Ann Arbor.

The Value of the Antiseptic System in Private Obstetric Practice; Conclusions based on a Study of the Puerperal Temperature. (Read before the Washington Obstetrical and Gynæcological Society, November 6, 1866.) By Henry D. Fry, M. D. [Reprinted from the "American Journal of Obstetrics and Diseases of Women and Children."]

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THE NEW PROFESSOR OF OBSTETRICS IN VIENNA.

The news of Professor Breisky's advancement to the position lately vacated by Professor Spaeth may have caused some surprise in Vienna medical circles, where it may have been generally taken for granted that Professor Carl Braun's influence would be successfully used to lift his brother into the coveted chair. There can be little doubt, however, that the appointment was a most excellent one, or that in selecting Professor Breisky the Government authorities were actuated by a desire to obtain the right man for the place. The new professor is broad and cosmopolitan in his views; although positive enough in his own convictions, he is not wedded to any narrow system of instruction. With American students, in particular, he has always been deservedly popular, for he has shown them a courtesy which, to tell the truth, they do not always meet with abroad. His interest in American gynæcology is well known; in fact, Breisky is one of the few Germans who have taken the trouble to study the operation for laceration of the cervix intelligently, and he is perhaps the only well-known foreigner, with the exception of a few in the United Kingdom, who has shown any real enthusiasm over Emmet's teachings.

Although his previous sphere of observation has been comparatively limited, Professor Breisky has enriched obstetrical literature with many valuable contributions, besides having brought the Prague school to a high state of excellence. We shall look for a great impetus to the study of obstetrics under his direction in Vienna—one that may even deserve to be characterized as marking a new era. Instead of the real teaching being delegated entirely to the assistants, as has latterly been the case, we are sure, from what has been known of the new professor in the past, that he will be found with his students at the bedside, infusing his own personality into the work. If we are not greatly mistaken, Americans will be more attracted to Vienna than before, as they will feel sure of a cordial reception from one who has ever been gracious to our young physicians. There is an opportunity for Professor Breisky to create an enthusiastic following. His personal qualities are most pleasing, while his acquirements are such that no one can read of his elevation to a broader field of usefulness without a feeling of unqualified approval.

It would hardly be becoming to refer to the reforms that he can institute; we have already hinted at the necessity of a closer personal relationship between professor and students. This is not an imaginary want. Many foreign students spend months in Vienna without coming into even remote contact with the professors. They are left to imbibe the latter's ideas in their intercourse with the assistants. This is not the case in every department, but it has been noticeably true in that of obstetrics. In order to impress his teachings forcibly upon students, an instructor must be brought into personal relations with them, and not deal with them through the medium of a third person. If Professor Breisky inaugurates this method of instruction at Vienna, he will prove a valuable addition to the faculty of the famous university, leaving out of consideration the scientific work which he will doubtless accomplish with his increased opportunities.

PARALYSIS DUE TO PERIPHERAL NEURITIS.

Neurologists have cause to be well pleased with the results they have obtained, within the past few years, in the investigation of the affections of the peripheral nerves. So recently only as 1877 Charcot stated, in the second edition of his masterly work on "Diseases of the Nervous System," that, apart from lead paralysis, he knew of no paralysis or general amyotrophia due to changes in the peripheral nerves. Since that period a rich literature on this subject, embodying faithful clinical records with careful and thorough pathological descriptions, has made its appearance. And now the various toxic paralyses (including alcoholic), the paralysis sometimes following diphtheria and the specific fevers, that occurring in certain cases of tabes, and that peculiar and interesting form known as *beri-beri* or *kakké*, observed among Chinese and Japanese, even when they are residents in foreign lands, are all attributed to inflammatory changes in the peripheral nerves solely. Quite recently French observers (Pitres, Vaillard, Francotte) have shown that in the progress of tuberculous disease the peripheral nerves may become the seat of tubercles, giving rise to the annoying pains and occasional palsies to which phthisical patients are liable.

Localized peripheral neuritis is easily distinguished by its being confined to a certain group of muscles and by the characteristic trophic disturbances that attend it. Not so, however, with multiple neuritis, which offers many points of resemblance to Landry's acute ascending paralysis and acute poliomyelitis. Landry's acute ascending paralysis, the true nature of the lesion of which is still doubtful, is differentiated by the absence of any marked change in sensibility, and by the absence of the electrical reaction and notable atrophy of the muscles. In acute poliomyelitis there are wanting the shooting pains and tenderness along the course of the nerve trunks which are so marked and characteristic symptoms of multiple neuritis. The form of progressive multiple neuritis depending upon alcoholic intoxication possesses some special clinical features. The patients usually exhibit some mental disturbance, the memory is especially weakened, and there is a tendency to incoherent talk. Dreschfeld mentions a strange delusion to which such patients are subject; they seem oblivious to the fact that they are confined to bed and fancy they take long walks.

Notwithstanding what has already been said, cases will occur, in practice, in which a differential diagnosis will be impossible. In obscure cases of this kind it will be well to bear in mind the close relationship between gout and multiple neuritis, a fact much emphasized by Buzzard in the Harveian course of lectures for 1885 ("Lancet," November and December, 1885). Furthermore, it will also be well to remember, from a prognostic point of view, the circumstance that there are cases of multiple neuritis presenting nearly the same clinical picture as acute poliomyelitis, but with this important difference, that they run a more favorable course, and terminate, in the majority of cases, in recovery.

ITEMS, ETC.

Infectious Diseases in New York.—We are indebted to the Sanitary Bureau of the Fourth Division of the Health Department for the following statement of cases and deaths reported during the two weeks ending August 3, 1886:

DISEASES.	Week ending July 27.		Week ending Aug. 3.	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever	10	7	25	6
Scarlet fever	20	5	17	7
Cerebro-spinal meningitis	2	2	3	3
Measles	71	10	50	12
Diphtheria	51	24	67	25
Small-pox	1	0	0	0

Cholera in the West.—Two cases of cholera are said to have occurred at Chippewa Falls, Wis., it being stated that both patients died with well-defined symptoms of the disease.

The Health of the State of New York.—According to the State Board of Health's "Monthly Bulletin" for June, in every thousand deaths there were 620 from typhoid fever, 73·80 from diarrhœal diseases, and 60·32 from croup and diphtheria. The combined death ratio in every thousand deaths from zymotic diseases, consumption and puerperal diseases, was 333·65 and 99·36 from acute respiratory diseases.

Hæmatozoa.—According to an eminent scientist, every full-grown ass in Great Britain is afflicted with entozoa in the blood. To this statement the "Boston Post" adds: "If it is a fatal disease, we should like to have it introduced into this country. There is an abundance of material for it to work upon."

A Sanitary Convention, under the auspices of the Michigan State Board of Health, will be held at Coldwater on Thursday and Friday, September 9 and 10, 1886, the time (September 23d and 24th) originally fixed for the meeting having been changed.

Army Intelligence.—*Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from July 25, 1886, to July 31, 1886:*

Brown, Joseph B., Colonel and Surgeon. Retired from active service, July 26, 1886. S. O. 171, A. G. O., July 26, 1886.

Gibson, J. R., Major and Surgeon. Ordered from the Department of the East to the Department of the Missouri on expiration of leave of absence granted in S. O. 158 c. s., A. G. O. S. O. 168, A. G. O., July 22, 1886.

Bentley, Edwin, Major and Surgeon. Ordered for duty as Post Surgeon, Fort Davis, Texas. S. O. 92, Department of Texas, July 22, 1886.

Taylor, M. K., Major and Surgeon. Granted leave of absence for one month, with permission to apply for one month's extension. S. O. 77, Department of the Missouri, July 24, 1886.

Middleton, Passmore, Major and Surgeon. Ordered to the Department of the East from the Department of the Missouri. S. O. 168, A. G. O., July 22, 1886.

Girard, Joseph B., Captain and Assistant Surgeon. Granted leave of absence for three months, with permission to go beyond the sea. S. O. 170, A. G. O., July 24, 1886.

Robinson, Samuel Q., Captain and Assistant Surgeon. Ordered for duty as Post Surgeon, Fort Brown, Texas. S. O. 92, Department of Texas, July 22, 1886.

Naval Intelligence.—*Official List of Changes in the Medical Corps of the United States Navy for the week ending July 31, 1886.*

Lumsden, G. P., Passed Assistant Surgeon. Ordered to duty at the Marine Barracks, Washington, for the month of August.

Cordeiro, F. J. B., Assistant Surgeon. Ordered to Receiving Ship Minnesota.

Society Meetings for the Coming Week:

Monday, *August 9th:* Boston Society for Medical Improvement; Gynæcological Society of Boston; Burlington, Vt., Medical and Surgical Club; Norwalk, Conn., Medical Society (private).

Tuesday, *August 10th:* Medical Society of the County of Rensselaer, N. Y.; Newark and Trenton, N. J., Medical Associations (private).

Wednesday, *August 11th:* Medical Societies of the Counties of Albany and Cayuga, N. Y.

Thursday, *August 12th:* South Boston, Mass., Medical Club (private).

Friday, *August 13th:* Medical Society of the Town of Saugerties, N. Y.

OBITUARY NOTES.

Eugene S. Yates, M. D., of Lawrence, Mass., died on Wednesday, July 28th. He was graduated from Bellevue Hospital Medical College in 1872, and from 1879 to 1883 he was the City Physician of Lawrence. At one time he was a member of the local board of health. His death is said to have been due to paralysis.

Calvin Seavey, M. D., of Bangor, Me., died suddenly on Sunday, August 1st, at the age of seventy-seven. He was graduated from the Medical School of Maine in 1837, and is said to have been the oldest physician in Penobscot County, and one of the best-known medical men in the State. He was a member of the Penobscot County Medical Society. His death was attributed to heart disease.

Letters to the Editor.

PASTEUR AND SPITZKA.

New York, *July 31, 1886.*

To the Editor of the New York Medical Journal:

Sir: In view of the kind tone of your editorial remarks relating to my researches on pseudo-hydrophobia, I regret to be compelled to occupy some space in the journal with a correction. I have not attempted to provoke hydrophobia in dogs, but I have attempted to produce and I believe have succeeded in producing, in a series of six dogs, all the symptoms on the strength of which Dr. Liautard pronounced the dog biting Miss Morosini to be mad. Two of these dogs died with *spurious* dumb-rabies, if I dare coin such a term; one was killed, and three—of which two still show paralytic, and one among them mental disorder—are still alive. I concluded that Dr. Liautard had found a mare's nest, and needlessly alarmed the public by mistaking the ordinary symptoms of meningitis or cerebritis in the dog—symptoms that Mendel produced a year ago by placing dogs in rotating drums—for those of hydrophobia.

I have also expressed considerable skepticism anent Pasteur's results. Dissected by logical critics in the manner Dulles, of Philadelphia, has followed, they appear inaccurately studied, hastily arrived at, based on insufficient premises, and involve actual fallacies. But I am not, nor have I ever been, in a position to deny that his allegations may contain a germ of truth. I simply ask for better proof than he has yet offered, and, until it be furnished, may be permitted to occupy a position of reserve, and at the same time to protest against being assigned the position indicated in some recent newspaper headings—"Pasteur *versus* Spitzka" and "Spitzka *versus* Pasteur." I have not done anything to merit being held up as a conspicuous antagonist of any one who, like Pasteur, has devoted more time to the subject than I have. My only purpose in discussing the latter in one of its aspects was to calm the public excitement which was unjustifiably and, I will assume, unintentionally fomented by one of the incorporators of a Pasteur institute. In this task the "New York Tribune" took a prominent part. A reporter of that paper, whose previous reports of an interview with me were unusually correct, recently approached me again and made some hasty notes, which I subsequently detected in company with extreme and exaggerated opinions in the "Evening Post." I presume that the article in the latter paper misled you—a fact which I deplore, but which I was powerless to prevent.

Respectfully yours, E. C. Spitzka.

Proceedings of Societies.

AMERICAN OPHTHALMOLOGICAL SOCIETY.

Twenty-second Annual Meeting, held at the Pequot House, New London, Conn., Wednesday and Thursday, July 21 and 22, 1886.

The President, Dr. William F. Norris, of Philadelphia, in the Chair.

Wednesday's Proceedings.

Pyogenic Micro-organisms, with Demonstrations and Experiments.—Dr. H. Knapp, of New York, exhibited bacteria in numerous test-tubes, on agar-agar, and also under the microscope. He showed two rabbits that he had operated on for cataract, on the day preceding the meeting, in the presence of members of the society. The instruments that had been used on the left eyes had been thoroughly cleaned, and those that he had used on the right eyes had been contaminated with staphylococcus pyogenus aureus. The left eyes were free from secretion, whereas there was a profuse discharge of matter from the right eyes, and they were in a state of intense destructive inflammation. He also operated on two other rabbits in the same way. An examination of the four rabbits showed that the right eyes in all were suppurating; the wounds in the left eyes of three of the rabbits were in a good condition. The left eye of one of the first two operated on was suppurating. This eye had become infected by contact with the right eye of one of the other rabbits, they having been kept in the same box. Dr. Knapp said that in the institutions of Europe instruments were placed in an antiseptic solution. That, however, had the disadvantage of dulling the edge of cutting instruments. His experiments had shown him that simple washing with water, followed by friction with a clean towel, rendered smooth instruments bacteriologically clean. In the majority of operations a certain amount of infecting material was required to produce any effect.

Dr. B. E. Fryer, of Kansas City, said that hydronaphthol would probably not affect the edge of a cutting instrument. It had also occurred to him that chloroform might sterilize instruments.

Dr. A. A. Hubbell, of Buffalo, asked if there were not certain conditions of the eyes which would favor infection of the wound after an operation.

Dr. Knapp thought that a lachrymal discharge with a certain amount of conjunctivitis furnished a favorable soil for the growth of bacteria. He had pricked the cornea to one or two thirds of its depth, and had covered the wound with an emulsion of bacteria. Abscess had developed in only one out of every four or five cases.

Dr. J. A. Andrews, of New York, said that he had frequently pricked the cornea, and had applied the staphylococcus pyogenus aureus, and had repeatedly seen recovery follow without suppuration or inflammation. He had never seen a failure to inoculate when the material had been introduced into the wound, mere contact not being sufficient to produce suppuration.

An Analysis of One Hundred and Three Cases of Exudative Retinitis associated with Bright's Disease. — Dr. C. S. Bull, of New York, read a paper with this title. [See page 119.]

Dr. E. Gruening, of New York, said that he had collected over one hundred cases of this affection, and he had found that none of his cases had lived two years after the diognosis of retinitis albuminurica had been made out. In this class of cases he had included only those in which the typical stellate changes were seen in the maculæ of both eyes.

Dr. David Webster, of New York, said that he was satisfied that, in rare instances, these patients did recover their general health and might live indefinitely. Some years ago he had examined the eyes of a clergyman and had found the typical appearances of retinitis Brightii. He had been examined fifteen years before by a competent observer, who had found the same condition and had also found albumin and casts in the urine. A slight trace of albumin was found at the time of Dr. Webster's examination.

Dr. O. F. Wadsworth, of Boston, said that when the retinitis albuminurica had come on during or immediately after pregnancy, he had seen the stellate spots entirely disappear from the maculæ. He had also seen typical stellate deposits in cases of cerebral tumor and in what was supposed to be meningitis, but in which there was no albuminuria.

Thrombosis and Peri-vasculitis of the Retinal Vessels.— A case was reported by Dr. George C. Harlan, of Philadelphia, who said that the patient, aged thirty-three years, came under observation June 5, 1886. Her father and a younger sister had died of Bright's disease; the mother had died of paralysis. During the past two years she had had considerable headache. There had been no trouble with the eyes until May 7th, when she noticed dimness of vision in the left eye. This increased during the day, and the following morning there was only light perception in this eye. There was no suspicion of specific disease. There was no uterine trouble and the heart sounds were normal. The urine had a specific gravity of 1·009, contained some albumin, but no tube casts were found. Examination of the eyes showed no light perception in the left eye. The media were clear. There were hæmorrhagic effusions scattered through the retina. Some were striated, extending in long streaks along the vessels. With one exception, all of the vessels of the retina were converted into white bands. The exception was a small artery having an independent origin. The vessels were of nearly normal size. Five or six weeks later the hæmorrhagic effusions had been absorbed, but there were no other changes. In the right eye there were several small hæmorrhagic effusions which subsequently disappeared. In July she had a slight attack of paralysis on the left side. Examination of the urine showed some albumin and hyaline tube casts. The rapid onset and the occurrence of blindness within a few hours seemed to exclude the possibility of disease of the vessels. Embolism would not account for the condition. The speaker suggested that the partial blindness for the first few hours was due to hæmorrhage, and that the complete blindness coming on after was due to thrombosis. Thrombosis of a whole series of vessels was, however, rare.

A New Test-type was shown by Dr. W. S. Dennett, of New York, who said that among the laity there was absolutely no knowledge of what normal eyes should be expected to see. The card presented was designed for the use of educational institutions. It contained one set of letters and a statement of the exact distance at which these letters should be seen. The desire was expressed that this or some similar card should be placed on the wall of every school-room in a conspicuous place, so that it should become of necessity a familiar object and a standard of measurement that would be remembered through life.

The Possible Retardation of Retinitis Pigmentosa.—Dr. Hasket Derby, of Boston, said that this affection was, as a rule, considered incurable, leading generally to complete blindness. He had seen the affection but twenty-seven times in thirteen thousand eye cases. In 1881 a boy, three years of age, was brought to him from West Virginia. It was observed that toward night vision diminished. There was no history of blindness in the family. Five years after he came again, accompanied by his sister, seven years of age; both children were night blind and presented the evidences of retinitis pigmentosa. Under the use of the constant current there was improvement. A similar case of improvement under the use of the constant current, under the care of Dr. Standish, was reported. The object of the paper was to invite discussion as to the use or non-use of such eyes for educational purposes, and as to the possibility of adopting measures for delaying the progress of the organic change.

A third case was that of G. W., aged fourteen, who presented the typical appearances of retinitis pigmentosa. Non-use of the eyes and the application of the constant current were recommended. He was subsequently advised by others to use the eyes freely. In five years vision diminished from three tenths to one tenth. This rapid progress of the disease it was thought might have been aided by the use to which the eyes had been subjected.

Dr. William S. Little, of Philadelphia, said that he had seen decided improvement in one case under the use of the faradaic current.

Dr. L. Webster Fox, of Philadelphia, said that he had treated a number of cases successfully, and had found that it was the negative pole that produced the good results. If there was no enlargement of the field after three applications, improvement was not to be expected.

Dr. George Strawbridge, of Philadelphia, said that he had tried the use of electricity in this affection thoroughly some ten years ago. He did not obtain benefit in a single instance. He placed more reliance upon the occasional use of alteratives—such as bichloride of mercury and iodide of potassium—looking on these cases as probably of syphilitic origin.

Dr. Samuel Theobald, of Baltimore, said that he had had no experience with the use of electricity in retinitis pigmentosa, but he had seen temporary improvement from the continued use of phosphate of iron, quinine, and strychnine.

Dr. S. D. Risley, of Philadelphia, said that he had secured improvement in the central sharpness of vision by the hypodermic use of strychnine. He had frequently seen improvement follow the use of this drug, but, as far as he knew, it had never been permanent.

Dr. Wadsworth said that a young man, twenty-four years of age, a divinity student, was seen in 1873 presenting the typical appearances of retinitis pigmentosa. He had well-marked night blindness. He continued his work, and was seen eight years after. Vision was about the same, but the visual field seemed to have decreased to a slight extent.

The Equivalence of Cylindrical and Sphero-cylindrical Lenses.—A paper with this title was read by Dr. Edward Jackson, of Philadelphia. The paper was intended to demonstrate the laws of such equivalence, and diagrams and formulæ were given.

A Congress of American Physicians and Surgeons.—The committee to whom the consideration of the proposition with reference to the organization of such a congress was referred reported the following resolutions, and recommended their adoption:

Resolved, That a committee of five be appointed, and that they be authorized to confer with committees from other medical societies with regard to the organization of a convention or congress of such societies, and that they report at the next meeting of this society.

Resolved, That it is the sense of this society that its welfare would be put in peril by any alliance or co-operation which would interfere with its autonomy or independent meeting.

These resolutions were adopted, and the following committee was subsequently appointed: Dr. O. F. Wadsworth, of Boston; Dr. C. S. Bull, of New York; Dr. George C. Harlan, of Philadelphia; Dr. Samuel Theobald, of Baltimore; and Dr. S. E. Fryer, of Kansas City.

Two Hundred and Sixty-three Cases of Cataract Extraction, with Particular Reference to the After-treatment.—Dr. Strawbridge read a paper with this title, and said that the method of operation, which was by the modified flap extraction, avoided the risks of the old Graefe incision and the corneal-flap incision, and gave a sufficiently large opening. An iridectomy in an upward direction was always performed. He gave the comparative results of the operation, and said that for the past two years a solution of boric acid (two per cent.) had been employed in cleansing the eye after the operation. The speaker's former plan had been, after applying a bandage, to put the patients to bed in a darkened room, keeping them in bed for from four to six days. Two thirds of the cases had been treated in this way. He had found this plan exceedingly debilitating in elderly individuals, and he had gradually given it up, so that, during the past six months, the patients were, practically speaking, kept in bed only twenty-four hours. The room was as light as any ordinary room. If, at the end of twenty-four hours, everything was doing well, the patient was allowed to move about the room. Cocaine had been employed in some cases. In one case, in which a four-per-cent. solution was used, a violent purulent inflammation began within twenty-four hours, and resulted in total loss of the eye. Subsequently he had employed it without unpleasant results. His plan was to use a two-per-cent. solution, drop in one drop, wait a minute, and then drop in a second drop, and to use only two drops. As much anæsthesia as was desirable was thus obtained.

Cataract Extraction without Iridectomy.—Dr. Knapp read a paper on this subject, and said that the last six cataract extractions which he had performed had been done without iridectomy. Three of these had made ideal recoveries, with clear, central, movable pupil, with neither an anterior nor a posterior synechia. The other three had more or less posterior synechia. Vision was fair, and could be rendered excellent by a simple needling if it remained insufficient. In performing the operation, a large section along the upper margin of the cornea was made. Before the operation the eye was fully cocainized, and the lids and conjunctival sac were washed and sterilized. After the expulsion of the lens, a small quantity of an antiseptic was injected into the anterior chamber along the whole section and eserine instilled into the conjunctival sac. The speaker believed that the chief advantage of this operation was in the possibility of keeping the wound perfectly free from foreign substances, including portions of the lens, capsule, and iris. How often anterior and posterior synechiæ occurred, what the final visual results were, and how frequently after-operations would be required, were questions which could only be answered by extended statistics.

Fifty Cases of Cataract Extraction were reported by Dr. Webster, with the following results: Successes, 82 per cent.; partial successes, 12 per cent.; failures, 6 per cent. Dr. Webster advocated the extraction of both lenses at the same sitting in judiciously selected cases.

Death of a Patient on the Fifth Day after the Extraction of a Hard Cataract.—Dr. Noyes reported the case and said the operation was perfectly satisfactory, and that the patient suddenly died five days after. The only lesions found at the autopsy were dilatation of the heart and insufficiency of the valves of the left side. Death seemed to have been due to heart failure. Sections of the eyeball were exhibited. Union appeared to have taken place exclusively through the medium of the epithelial layer.

Dr. Webster said, in regard to the use of cocaine, that the more he had employed it, the more did he see the necessity of using as little as possible in cataract extraction. Some of his cases that had not done well, he thought, were due to the use of too much cocaine.

Dr. B. Joy Jeffries, of Boston, said that in cataract extractions he had found it of decided advantage to instill cocaine into both eyes. One drop a minute or two before the operation was sufficient. It rendered the eye quiet, and the patient could keep it open.

Dr. W. F. Mittendorf, of New York, said that he had had two cases of serious complication after cataract, which he attributed to the use of cocaine. In one the eye was lost, and in the other it came near being lost. The cocaine solutions were fresh, but they were strong and were used freely. Recent observations showed that the injurious action of cocaine was especially upon the epithelial layer and in shutting off the supply of lymph fluid. The epithelium suffered very rapidly from lack of moisture, especially if the eye was kept open. It had been recommended to close the eye immediately after the introduction of cocaine.

Dr. Gruening said that he had performed extraction without iridectomy twice. In one case the iris prolapsed, and rendered excision necessary. The other case was entirely successful.

Dr. Noyes said that he had performed extraction without iridectomy in six cases. In three of the six cases there was perfect union with a central circular pupil and accurate vision. In one case intra-ocular hæmorrhage came on twelve hours after the operation, but this might happen under any method. In two cases prolapse of the iris occurred, the prolapsed iris was excised, and in one case the result was entirely satisfactory. In the second case satisfactory vision was not obtained. The impression made on his mind from this small series of cases was that, while the operation deserved attention, the cases must be carefully selected. His belief was that a satisfactory result could be more certainly secured with iridectomy.

Some Medico-legal Cases were reported by Dr. Jeffries. The cases described referred entirely to color blindness.

Dr. Charles A. Oliver, of Philadelphia, exhibited and read a description of a new series of loose wools for the scientific detection of subnormal color-perception (color-blindness). They comprised ninety-seven bundles of Berlin worsteds, composed of five large principal test-skeins, twenty small pure match skeins, and seventy-two small confusion skeins. To each small skein there was attached a metallic bangle bearing the exact equivalence of the color's composition, tint, and shade stamped upon it in a way that could be only understood by the surgeon. The colors were all of equal relative intensity. The wools were all of one manufacture, and had been dyed with vegetable materials.

Dr. Dennett exhibited a set of test-wools which had been made into spheres, to each of which a number was attached.

NEW YORK CLINICAL SOCIETY.

Meeting of April 23, 1886.

The President, Dr. A. A. Smith, in the Chair;
Dr. B. Farquhar Curtis, Secretary.

Some Rare Affections of the Rectum and Anus.—A paper with this title was read by Dr. Charles B. Kelsey. [See page 141.]

Dr. R. J. Hall said that he had recently seen a case of so-called lupus (really tubercular disease) of the recto-vaginal septum and vulva. A recto-vaginal fistula had been formed allowing the escape of fæces. It was treated by thorough curetting. Microscopical examination showed true tubercle.

Dr. T. H. Burchard had seen a case of vulvar lupus in Dr. Taylor's service at Charity Hospital. It occurred on the left side of the vulva in an elderly woman. Both hypertrophy and ulceration were present, but no glandular enlargement. It had been erroneously considered chronic chancroid and epithelioma, but microscopical examination had proved it to be lupus. The disease was treated by excision and the curette by the speaker, at Dr. Taylor's request. The parts were drawn together with sutures, but no union took place, and the growth continued to extend both up into the vagina and down upon the thigh. The patient was afterward lost sight of.

The following was somewhat similar to Dr. Kelsey's case of fistula: Two years ago a gentleman had an ischio-rectal abscess, which was incised. Subsequently a surgeon discovered a fistula, which he treated by incision and cured. Three months after, pain occurred along the left sciatic nerve with every act of defecation. One year ago the patient came under the speaker's care; a small swelling was discovered to the left of the anus, and pressure on the left wall of the rectum caused pain in the course of the sciatic nerve. No fistula could be found. Some months later hæmorrhage occurred at stool. The pain on defecation had become so severe that the patient, although he was a robust, healthy man, fell into the habit of taking morphine hypodermically before going to stool. Last winter the speaker brought down pus from the rectum by pressure with his finger upon its left side, but no opening could be found. On the fifth examination the probe entered a minute opening, and the blind internal fistula discovered was incised. It healed, and its cure entirely relieved the sciatic pain.

Dr. Kelsey remarked that, although this sciatic pain was symptomatic of fistula, he had never seen it so severe as that.

Dr. Hall, alluding to Dr. Kelsey's failure with cocaine, thought that it was perhaps due to his methods, and asked if it was applied to the surface of the ulcer.

Dr. Kelsey replied that it was not, as the object was to anæsthetize the sphincter. He injected it four times above the internal sphincter and four times over the external sphincter. The same method had proved successful in many other cases.

Dr. Hall said that he had usually injected it over the nerves about half an inch from the anus as they crossed the ischio-rectal fossa, and with success.

Dr. L. B. Bangs had seen cocaine fail in two cases of fistula in ano, and in some urethral operations, but had not considered the failure as due to idiosyncrasy of the patients.

Dr. Burchard had reported a case of cocaine poisoning in a boy from ten minims of a four-per-cent. solution. To prove that the symptoms were due to the cocaine, he had given to the same lad (but without the latter's knowledge) one eighth of a grain of cocaine by the mouth, and had caused pallor, contracted pupils, etc. Lately he had injected ten minims of a four-per-cent. solution at intervals of five minutes into a gentleman's thumb (in a case of paronychia) until two drachms had been used, without producing any anæsthesia.

Dr. A. H. Smith, speaking by invitation, remarked that a gentleman under his care had taken a teaspoonful of the fluid extract of coca before breakfast, and suddenly lost the power of standing and fallen to the floor. The attack was of short duration, but seemed to show that in some persons there was a remarkable idiosyncrasy in regard to this drug.

The Pathology of Gout.—Dr. Walter Mendelson read a paper on this subject. [See p. 146.]

Dr. M. A. Starr objected to the theory of the nervous origin of gout, because gouty manifestations did not occur definitely in certain nervous diseases.

Dr. Mendelson replied that it was acknowledged that the nervous system presided over nutrition; but the centers which had this duty had not been localized. Charcot had, however, reported a case of gout, occurring in a hemiplegic patient, limited to the paralyzed side, and ascribed it to vaso-motor disturbances.

Meeting of May 28, 1886.

Dr. L. B. Bangs in the Chair.

Mitral Disease in Children.—Dr. W. H. Katzenbach reported the following cases:

Case I.—Katie B., aged seven years, of German parentage, had an attack of rheumatism in the ankles three years ago, which confined her to bed three or four days, and which was followed by chorea lasting five or six months; a second attack of rheumatism occurred one year ago, milder than the previous one, but followed by chorea of the same duration as the first.

In January of the present year another mild attack of rheumatism occurred. He was called to see her on the 28th of the month. For a week she had been complaining of pain in her neck and head, and had scarcely slept night or day during that time. There were choreic movements of the face and of all the extremities. These movements were so incessant that it was impossible to keep her covered. Urine and fæces were passed in bed. At times she would scream loudly, especially at night. She was emaciated, pale, and weak. Her appetite was very poor, tongue furred, protruded suddenly and as suddenly returned; pulse rapid, 120 a minute; temperature normal; urine negative. The cervical spine was tender; there was no tenderness of any of the large joints. The lungs were normal. The heart apex was in the fifth space, the impulse was increased, and a loud systolic murmur was conveyed around the chest, and was as intense posteriorly. She was kept in bed, and ordered a calomel purge. She was given chloral and opium to induce sleep as well as to relieve pain; chloride of ammonium and tincture of chloride of iron were given for the anæmia, and also three drops of Fowler's solution of arsenic three times a day. A diet of milk-punch and eggnog was ordered. Improvement quickly began, and progressed very satisfactorily. The arsenic was increased by one drop every three days until she was taking nine-drop doses. The appetite and strength improved, and the choreic movements diminished, so that in a month she was sleeping well, and was able to feed herself. She became bright, and manifested interest in what was going on about her. At the end of five weeks she was out of bed. The arsenic was continued in nine-drop doses for about a week, and was then diminished by one drop every three days until March 14th, when she was taking four drops. The iron mixture had been continued, but the chloral and bromide of sodium had been stopped. The chorea had almost disappeared, and was observed only in movements of her hand when trying to thread a needle. She ate well, and had gained in flesh and strength. She was out every pleasant day, and was not easily fatigued. Arsenic was continued for a fortnight in four-drop doses. On April 28th she had entirely recovered from the chorea. Arsenic was directed to be kept up in three-drop doses. The mitral regurgitant murmur was heard with some intensity. Anæmia was still present. She was ordered citrate of iron and quinine on May 21st.

Case II.—Lizzie B., a sister, aged five years, had always been well up to the last week of February. She then complained of pain in her knees, which her mother attributed to her garters. On March 5th or 6th irregular movements appeared in her upper and lower extremities. On examination of her heart, the organ was found slightly enlarged, and a loud systolic murmur was heard at the apex, conveyed around, and heard with great intensity over the whole chest posteriorly. As the chorea was mild, she was put on tonic treatment without arsenic. On April 28th she had recovered from the chorea and was looking very well, though still anæmic. On May 21st the mitral regurgitant murmur was present with the same intensity.

Dr. V. P. Gibney had under his care a young lady of twenty years of age who had been treated by him some years ago for a neurosis of the hip, and had been cured. Two or three years afterward she had had acute articular rheumatism in the knee and other joints, and six months later general chorea developed and ran the usual course. Then the hip troubled her again, and one year later the chorea returned. In both attacks of chorea she had had pain about the heart, and during the second attack, two years ago, a murmur was detected which had grown louder since. He would like to ask about the prognosis in cases of heart disease in children.

Dr. Katzenbach thought that lesions accompanied by so much hypertrophy as had been present in his two cases were incurable, but that the prognosis as to life was fair, at least for some years.

Dr. J. W. Wright had known murmurs that had originated without rheumatism to disappear, but never those which had come from rheumatism. He knew a young man who, eight years ago, had developed a well-marked mitral regurgitant murmur, certainly not a "blood" murmur, without any rheumatism or other discoverable cause. Eighteen months ago he had examined him and found that it had entirely disappeared.

The President remarked that the prognosis of heart disease in children was better than in the adult.

Dr. L. E. Holt had seen two cases in children with no family history and no rheumatism, and he had referred their origin to previous attacks of diphtheria. He had also seen two children (sisters) with heart disease, who presented well-marked tendinous nodules, appearing before the heart symptoms, the family history being rheumatic. He considered the prognosis as not better than in the adult, especially when the heart muscle was much involved.

Laparotomy for Suppurative Peritonitis.—Dr. R. J. Hall presented a patient who had just recovered from a laparotomy done for suppurative peritonitis originating from a perforation of the vermiform appendix in a hernial sac. [See the "Journal" for June 12, 1886, page 662.]

Dr. T. H. Burchard said that he was on record as strongly urging the necessity for operation in such cases. Last spring he had reported in the "New York Medical Journal" a case of omental abscess in which he performed laparotomy with the object of evacuating the pus, and in which the abscess burst into the peritoneal cavity at the time of operation; the patient recovered from the operation. With the permission of the society, he would show now a patient operated on in February of this year for obscure chronic iliac abscess, the peritonæum having been opened in the operation. [The patient, completely cured and in excellent health, was shown, Dr. Burchard reading a history of the case which he had read before the New York Academy of Medicine, April 15, 1886.]

Dr. Gibney remarked that he had seen many obscure iliac abscesses occurring in adults, and that, while they would sometimes open spontaneously and disappear, they generally extended and caused disease of the sacro-iliac articulation.

Dr. Hall said that such abscesses were generally due to tubercular disease of the pelvic bones—omitting those due to perinephritis and vertebral disease. He had seen one case (in a woman) in which both ilia were involved. Operation revealed an immense suppurating cavity, but it closed under treatment. The patient, however, was not cured, for hip disease developed afterward, with the usual disheartening results of that disease in the adult.

Reports on the Progress of Medicine.

OTOLOGY.

By CHARLES STEDMAN BULL, M. D.

Epileptiform Attacks caused by Simple Chronic Otitis Media.—Noquet ("Rev. mens. de laryngol. et d'otol.," July, 1886) brings forward some observations of his own in regard to the connection between chronic otitis media and epileptiform seizures. He recognizes the fact that epilepsy is more often met with in affections of the auditory and in suppurative inflammation of the tympanum; but he thinks that naso-tubal catarrh—causing obstruction in the Eustachian tube, a vacuum in the tympanum, and, as a result, epileptiform attacks from intra-auricular compression—is practically the same as simple chronic otitis media. There is the same exaggerated pressure exerted by the ossicula upon the labyrinthine fluid and acoustic nerve. This pressure may be diminished by aspiration of the tympanic membrane and catheterism and insufflation of the Eustachian tube, and the epileptiform attacks disappear at once, to return only because the treatment is interrupted. The irritation of the nervous filaments in the labyrinth is transmitted by reflex action to the bulb, and thus causes different phases of epilepsy; tetanic convulsions of the muscular system, contraction of the vessels of the pia mater and face, clonic convulsions produced by the cessation of the vascular spasm, and by the asphyxia resulting from the tetanism of the respiratory muscles, coma due to exhaustion of nerve force. The fact that increase of the pressure on the intra-labyrinthine fluid provokes, ordinarily, merely vertigo or epileptoid attacks without loss of consciousness or convulsions, is explained by admitting that the pressure is relatively feeble and the irritation is thus limited to the nerves of the vestibule and ampullæ, and is not propagated to the bulb. If this pressure increases and reaches its maximum, then the irritation is propagated to the bulb and epileptiform attacks result.

The Treatment of Suppuration of the Tympanum by Instillations of Solutions of Mercuric Bichloride.—Dujardin (*Ibid.*, June, 1886) proposes to treat cases of suppurative inflammation of the middle ear, especially in tuberculous patients, by injecting solutions of corrosive sublimate through the Eustachian tube. After introducing the catheter into the mouth of the tube, he first forcibly inflates the tube and drum cavity with air. This clears out the pus and prepares the way for the medicated solution. He then introduces through the catheter a little filiform hollow rubber sound as far as the tympanum. Into the open mouth of this sound he puts several drops of a two-per-cent. solution of corrosive sublimate, and then blows them through the sound into the drum cavity, either by the mouth or by Politzer's air-bag. These instillations are repeated daily. The patient also washes out the ear several times daily with a solution of corrosive sublimate, fifty centigrammes to one thousand. Dujardin claims good results from this treatment.

Tinnitus Aurium in Affections of the Stomach.—Ménière's opinion here given (*Ibid.*) is opposed to that of most otologists, that subjective noises in the ears are always premonitory of a diminution or loss of hearing. He believes that the tinnitus occurring in patients suffering from dyspepsia arises in the internal ear, and is of varied character, but the noises are never isochronous with the pulse. After examining a large number of cases, he comes to the conclusion that one may become deaf by way of the stomach. The diagnosis is rendered more exact by the absence of lesions of the external or middle ear. The tinnitus may appear before any of the symptoms of disease of the stomach, though it usually occurs during the second or third year of the gastric lesion. It generally affects but one ear, but it may affect both ears. The deafness is variable. The diminution or augmentation of the tinnitus usually follows the descending or ascending course of the dyspeptic lesion. Local treatment gives but barren results, though Ménière claims to have seen some good results from static electricity.

General Atrophy of the Conducting Apparatus of the Ear.—Richey's paper is on proliferous inflammation ("Arch. of Otol.," xv, 1). He regards this condition as a phase of a local atrophy rather than of an inflammation. He does not consider them so extremely hopeless as do many aural surgeons, and thinks that in young people of good nutrition in other respects there is a chance, by careful, persistent, and judicious management, to make many of them better, or at least to delay the evil consequences. His chief reliance is vapor of iodine, and he judges its effects by the appearance of hyperæmia of the drum-membrane, and particularly of the vessels along the handle of the malleus. In cases of long standing it is not possible to obtain this effect at once, but by a visit every day for several weeks it may be accomplished, and afterward it is only necessary to see the patient often enough to foster a moderate amount of action. This will vary with the individual and with the length of time the disease has already existed. In some old cases it can not be done at all, and these are hopeless. The application through the Eustachian catheter to the orifice of the tube and vault of the pharynx of an astringent solution of silver nitrate (1 to 500) will not only abort the deleterious effect of the instrumentation, but will greatly benefit the hyperæmia which makes advisable the introduction of the catheter. He regards impaction of cerumen and an almost inaudible *seething* tinnitus as separately or together the earlier symptoms of the disease. A collection of cerumen is not necessarily due to increased action of the glands, but to retarded motion outward of the epidermis of the external meatus resulting from progressive atrophy, which in time, affecting the gland, diminishes their secretion.

A New Knife for removing Adenoid Tumors from the Naso-pharyngeal Space.—Guye's instrument (*Ibid.*) consists of a flat circular knife, fastened to the end of a stiff rod, the latter bent at an angle of forty-five degrees to the handle in which it is set. The knife is elliptical in shape, about 10 mm. long and 5 to 8 mm. wide, and 1 mm. thick. Its external edge is rounded and the inner edge beveled, so that on the posterior portion its edge is like that of a sharp spoon. The insertion of this instrument behind the soft palate is hardly noticed by the patient, and the soft growths are easily excised by moving the instrument upward and downward and drop into the pharynx.

The Treatment of Diseases of the Middle Ear by Means of Lucae's Pressure-probe.—Eitelberg's paper (*Ibid.*) is a plea for the employment of the "spring pressure-probe" in the treatment of chronic middle-ear catarrh, by making piston-like movements of the short process of the malleus, by which, in suitable cases, the rigidity of the chain of small bones will be mechanically removed. This treatment, according to Lucae, is adapted only for the cases in which Rinne's experiment proves negative in connection with marked diminution of hearing for speech. Eitelberg confined himself to one or two strokes of the probe at the first sitting, but sometimes afterward employed up to ten strokes, according to the sensibility of the individual. As far as the pain caused by the procedure is concerned, it varies within wide limits. The sensitiveness is most marked, indeed almost intolerable, when the probe touches the handle of the malleus, through which part the malleus, and so the whole chain of bones, can be moved to the greatest extent, as is seen by the large excursions made by the drum-membrane. By pressure of the probe on the short process, a pale-yellow spot appears at this point, an evidence of the anæmia caused mechanically. Some moments after completion of the operation the vessels along the handle of the malleus fill rapidly, and the drum-membrane appears hyperæmic along its upper border. Trifling hæmorrhages sometimes appear in the drum-membrane, in the region of the short process. Serious accidents, such as inflammations with tedious suppuration, were never noticed after the use of the probe. Vertigo has occasionally occurred in the course of the treatment by means of the probe. A complete and permanent cessation of noises (subjective) was not noted in a single case, though a temporary improvement may be produced.

Membranous Occlusion of the External Auditory Canal.—Rothholz (*Ibid.*) reports a rare case of membranous occlusion of the external auditory canal occurring in the course of simple chronic otitis media, with secondary implication of the external meatus. The patient was twenty-one years old, who from infancy to her fifteenth year had suffered from a purulent discharge from the right ear. The otorrhœa then ceased spontaneously. Some time afterward considerable deafness ensued, and for a year there had been tinnitus. In the right auditory canal a membrane could be seen, in position corresponding with the membrana tympani, but remarkably flat. The air-douche produced no improvement in hearing. An extensive incision was made in the pseudo-drum-membrane, and, after the margins of the wound had separated, a second membrane, the true drum-head, appeared a few millimetres behind it. Several radial incisions were thereupon made in the diaphragm, and cotton tampons inserted in the opening. By these means the membrane was caused to disappear in a short time, nothing remaining but a narrow border. The mechanism of the process is obscure. Possibly there was at first great swelling of the integuments of the walls of the canal until the opposite walls came in contact, and the ensuing adhesion was stretched into a membrane by the gradual subsidence of the swelling.

Diplacusis; State of the Bone-conduction.—Rothholz (*Ibid.*) reports an interesting case of diplacusis, occurring in a musical director, who was affected with intense vertigo a short time after a trying march under a burning sun. He fell to the ground and vomited. At first there were no aural disturbances; soon, however, while some vertigo continued, slight tinnitus ensued. Two weeks later the patient observed more serious auditory disturbances, which annoyed him most when playing the organ, because he perceived the bass notes only confusedly. The watch was heard right, $\frac{2}{200}$; left, $\frac{25}{20}$; whispered speech right, at 15 cm.; left, at 5½ metres. The tuning-fork in air-conduction was heard correctly on the left, but on the right side almost a full tone higher. But, if the vibrating tuning-fork was firmly pressed into the right external auditory meatus, the patient heard the tone only very slightly higher than on the left side. Rothholz ascribes the affection to a simultaneous inflammation, probably of a serous nature, of the middle and internal ear. In favor of inflammation of the middle ear we have the difference between bone- and air-conduction. On the other hand, the intense vertigo and the vomiting were probably due to labyrinthine disease, and the diplacusis in bone-conduction was certainly of that origin. The treatment comprised catheterization from closure of the right ear, potassium iodide internally, and the constant current with the positive pole to the right mastoid process; and a cure was effected in a few weeks.

Histological Changes affecting the Soft and Osseous Structures of both Temporal Bones in a Case of Tertiary Syphilis.—Moos and Steinbrügge report in detail the results of their examination of the ears of a syphilitic patient (*Ibid.*). The patient was a man aged thirty-seven at the time of the first examination, and who remained for seventeen years under observation. The destruction of the bony frame-work of the nose occurred comparatively early in the course of the disease. The faucial orifices of both Eustachian tubes were closed by numerous thick, radiating fibrous bands. There was no demonstrable deviation in the plane of the drum-membranes, in the position of the handle of the malleus, or in the cone of light. Ordinary conversation was not heard beyond one metre. The tuning-fork, applied to the forehead, was not heard. At the autopsy there was found syphilitic caries of the skull and hard palate. The mastoid process of the right side was sclerosed. The Eustachian tube was patent. The tympanum contained a quantity of muco-purulent secretion. The left auditory canal was filled with pus and the mastoid process sclerosed. The mucous membrane of the tympanum was much thickened and the tympanic cavity was filled with pus cells and giant cells. The Eustachian tube was pervious. In both bones large medullary spaces filled with small round cells were found in the floor of the tympanum and below the cochlea, and the same things existed in the roof of the tympanum. In certain portions the solid bone substance had been absorbed. The periosteum of the promontory was very much thickened and contained numerous large cavities. The presence of portions of normal bone cut off from the main bony mass by the strangulation of the proliferating periosteum deserves notice. The membrane of the round window was adherent in many places to the neighboring structures. There were homogeneous deposits of pigment between the fibers of the acoustic nerve. The perilymph and endolymph were coagulated and contained blood globules, small cells, and fat granules. Hæmorrhagic extravasations were found in the perinæum of the tympanic plexus and between the nerves of the modiolus. All these changes resemble strongly the description given by Rindfleisch of "syphiloma ossium," where the syphilitic infiltration creeps along the Haversian canals, invades the compact structure of the bone, and produces localized absorption of the tissue. The hæmorrhages found in the neurilemma of the plexus tympanicus, as well as the exuberance of the periosteum, explain the genesis of many of the so-called pure "nervous otalgiæ," occurring without objective signs of ear disease in the course of constitutional syphilis.

The Duration of the Sonorous Excitation necessary to Perception, and a Description of an Acoumeter based on this Idea.—Gellé's article is a plea for the necessity of greater accuracy in testing the hearing power ("Ann. des mal. de l'oreille et du larynx," March, 1886). In testing by the watch, he assumes that the intensity of the sound, its pitch, and its distance from the meatus at the moment of passage being the same, it must be inferred that the result is due to the duration of the passage of the sonorous body in front of the ear, and this duration may be calculated. From the measurement of this rapidity of translation may be deduced the irritation of the acoustic necessary to perception, the rapidity of motion which extinguishes the sound, and that which permits the sensation to be perceived. For the purposes of more accurate measurement he has devised the following instrument: A blade or bar of steel, sixty centimetres long and five centimetres wide, is placed edgewise upon an oaken plank, one end being firmly grasped between the jaws of a vise which rests on this plank. The latter is rendered immovable by weights, and the whole contrivance represents an ear in the horizontal sense. The free end of the steel bar terminates in an addition, in which may be inserted either a tuning-fork or a telephone. At the level of this extremity the oaken plank is armed with a scale, graduated in centimetres, for measuring the digressions or variations made by the elastic bar during the experiments. The telephone corresponds to an agitator set in motion by a galvanic battery placed at a distance, and the resulting sound is graduated by means of the sliding spool. This sound is very feeble, but constant. The ear of the subject is always placed at the same distance from the sonorous body, which is framed in an annular support placed in front of the telephone, and carried by the oaken plank, against which the patient leans his head. It is known that the oscillation of the elastic bar takes place in a quarter of a second. If the telephone is removed to a distance of ten centimetres, the oscillation will at first be twenty centimetres; the rapidity of motion will be the relation existing between the distance traveled and the time. If, in a quarter of a second, twenty centimetres are traveled, then one eightieth of a second will represent the time of the passage of the telephone in front of the meatus and that of the excitation. By a number of experiments the points where the sensation ceases and begins may thus be found, and we have thus a measure of the duration of the sonorous excitation necessary to perception. At first the telephone should always be removed beyond the zone of audition, and should be stopped after the first or second oscillation. In healthy ears, variations of ten, fifteen, and twenty centimetres are demanded before the sound of the telephone is extinguished; but in diseased ears the experiment is extremely simple, and the result is rapidly obtained.

Fatigue and Arrest of Aural Accommodation; Intermittences of Sensation observed at the Limit of Perception.—Gellé (*Ibid.*) concludes from his experiments that, at the limit of perception, near the zone of silence, the search or pursuit after sensation demands particular attention and adaptation of the organ, and, in fact, nothing wearies in the audition of zones gradually increasing in their intensity. On the other hand, fatigue and loss of power occur easily in the audition of sounds emitted with an intensity which is rapidly rendered weaker. In deaf persons there is a very appreciable period of time between the audition of the loud sound at the beginning and the perception of the feeble sound which follows. Gellé thinks that there is a fatigue of the transmitting apparatus and of the accommodation of the organ, which, in a diseased ear, may readily end in complete exhaustion, and which is also very perceptible in healthy ears.

Examinations of the Auditory Organ of School-children.—Bezold here contributes the second part of his paper ("Arch. of Otol.," xiv, 4), the first part having appeared in the same journal (xiv, 2 and 3). This part includes the consideration of normal drum-head reflexes. He considers that the reflex of the sulcus should be regarded as a normal reflex. He found that the anatomical relations in children in more than two thirds of the cases permitted him to inspect the drum-head directly in its entire extent. In the pathological condition he found that a complete absence of the triangular reflex is met with not only with reduced function, but also with 2·11 per cent. of persons with normal hearing. Therefore, when this slight alteration of form of the drum-head alone, without other accompanying pathological alterations, especially without permanent occlusion of the tubes, influences the hearing-distance at all, its reduction is so slight that it is altogether impossible to demonstrate it with our usual methods of examination. Symptomatically, therefore, the absence of the normal reflex can not be called worthless. When the normal reflex is displaced, it has been shown to be due to the formation of a greater pan-like depression of the drum-head. The occurrence of this alteration may be observed when the hearing distance is perfectly normal. The macular reflex *above* the short process of the malleus and the punctiform linear or more expanded reflex *behind* the short process come under observation also with normal hearing distance. Under the head of anomalies of color in the drum-head, what is known as the posterior streak of opacity is probably developed at the place of a former posterior fold, and thus points to preceding tubal processes. It occurs with comparative frequency in normal relations of hearing. When it is the clearly marked commencement of an opacity, it is possible that inflammatory processes, which were localized exclusively in the membrana tympani and drum-cavity, may have led to deposits at this point in particular, because by its greatest tension it gives rise readily to disturbances of circulation. Bezold considers the conditions of the reflexes especially indicative for the diagnosis of local atrophic depression, or of a collapse affecting the entire drum-head. He applies the term atrophy to all cases in which there appeared reflexes of concavity in the posterior half, and a more or less complete circle of reflexes round about in the intermediary zone or still farther toward the periphery. The term cicatrix in the drum-head he applies to those darker spots which were surrounded by a sharp, opaque, or even calcareous border, or which were found sharply circumscribed in a drum-head exhibiting intense opacities over larger surfaces and partly depressed. Atrophied and cicatricial spots were often seen in persons with normal hearing. Nasal speech was present in 1·49 per cent. of the cases examined. Although adenoid vegetations were not present in all these cases, catarrhal thickening and hypertrophy of the posterior end of the inferior turbinated bone were always found. As regards the existence of former ear affections, in a large number of the children absolutely nothing could be demonstrated on the drum-head of the antecedent perforation, and merely the functional disturbance had remained as the result of the old purulent inflammation, long since ceased. Bezold found that subjective noises in the ears were more frequent in childhood than has usually been believed. Of the children found with ear disease in schools, according to the state of the drum-head disclosed, 41·7 per cent. offered a sure prospect of more or less complete cure if subjected to proper treatment. It should be regarded as one of the objects of school hygiene to exclude persons affected with otorrhœa from school until a rational antiseptic treatment has at least removed all fœtor, and, if possible, stopped the discharge also. Bezold believes that the result of his examinations demonstrate statistically that the mental development of the individual suffers a limitation corresponding to the degree that his hearing power is diminished.

The Relations of the Chorda Tympani to the Perception of Taste in the anterior two thirds of the Tongue.—Schulte's observations (*Ibid.*, xv, 1) are based upon cases examined by himself and upon an examination of all clinical and anatomical facts hitherto published. His first case occurred in a lady, aged thirty-four, in whom the chorda tympani had been divided by attempts to destroy an aural polypus with the sharp spoon. This case proved that a severing of all the paths of conduction of the chorda tympani is followed by a complete abolition of taste in the anterior two thirds of the corresponding side of the tongue. From this Schulte concludes that the chorda tympani furnishes all the fibers of taste for the anterior two thirds of the tongue. He differs from Wolf's view of the relation of the chorda tympani to the function of taste. In favor of his own view, he cites the opinions of Bernard, Duchenne, Cohn, Stich, Scotto, Voltolini, Inzani, and Lussana, based on clinical observations. On the other hand, Schulte thinks that even an historical critical review of all the results obtained in the endeavor to solve the question of the gustatory nerves in the anterior portion of the tongue does not furnish any fact or defensible argument against his own view that the chorda tympani contains all the fibers of taste in the anterior two thirds of the tongue. Since division of the trigeminus or the facial at their points of origin in the cranial cavity is followed by neither loss of function nor degeneration of the fibers of the chorda, it must be regarded as settled that the chorda springs from neither of these nerves. Schulte adopts Sapolini's view as the true one—that of an existing, quite independent nerve-path, of which the chorda tympani is merely the peripheral end. This nerve-trunk, which supplies gustatory fibers to the anterior two thirds of the tongue, Sapolini calls the thirteenth cranial nerve.

Observations on the Watch as an Acoumeter.—Bezold here (*Ibid.*) gives his reasons in detail for abandoning the use of the watch as a test of the acuity of hearing. The hearing-curve obtained with the watch appears quite different from the descending curve of whispered speech, and also from the curve found with Politzer's acoumeter. With the employment of the other tests, the number of those possessed of excellent hearing is marked by a very considerable ascent at the beginning of the curve, and following this we have a descent in a form approximating the parabola; on the other hand, with the watch, the results are strikingly different, the curve showing two maximum points separated by fully two metres, all indications of the parabola form being absent. In his examinations of school-children, while the results with whispered speech and, in a less degree, with Politzer's acoumeter were, on the whole, decided and consistent, the statements of at least a part of the pupils were vacillating and uncertain when the watch was employed. The contradictory results in using the watch may be explained as follows: The ticking of the watch belongs to the class of sounds which most persistently strike our ears, and to which we are accustomed and, in the performance of mental work, compelled to disregard. The uncertainty of tests made with the watch rests partly on psychical grounds and partly is connected with real after-sensations. According to P. Wolf, the tones contained in whispered speech extend over the lower eight octaves. If we make use of speech, our test includes the greater part of the scale which is formed of the lower eight octaves and, moreover, sounds of the most varied character. Why should the two tones of the watch, which lie within the limits of this scale, be used as a separate test?

Miscellany.

The Doctor as Patient.—The "Boston Medical and Surgical Journal" says:

"The study of medicine and personal devotion to the alleviation of suffering do not insure the doctor against the ills common to all mankind; nor does an intimate acquaintance with the vagaries of the sick enable a physician to pass through his own trials with equanimity. In fact, the doctor is far from appearing at his best in the *rôle* of patient; he feels as much out of place on a sick bed as would a general officer if he were reduced to the ranks. He has been so long accustomed to command that he finds it very hard to obey, at least, without some sort of a protest.

"During his student days he was led astray by his imagination, which made him suffer from the ills of which he studied. He probably, at that time, convinced himself of the ease with which one exaggerates his own sensations, and learned to disregard his own feelings for the most part. Only in such a way as this can we account for the neglect in himself of those beginnings of disease which a layman would suppose would infallibly arrest a doctor's attention, as they certainly would in a second person; as it is, he usually disregards his early symptoms and goes about with a temperature higher than that of the patient whom he sends inexorably to bed. He hopes for the best in his own case, as in others, but he fails to prepare for the worst, as he advises his patients to do, for he uses up, by continuing his work, the strength he ought to reserve to carry him through the sickness it needs no angel sent from heaven to foretell. Once fairly prostrate, it is usually the alarmed relatives who summon the doctor, rather than the patient himself.

"And it is no light task for the brother physician who presides over his sick bed to care for the prostrate individual, who insists on discussing the method of treatment, and, with a disordered imagination and weakened intellect, desires to sit in judgment on the conduct of his own case. The patient is apt to be skeptical as to the powers of the drug on which his friend and adviser relies. He suspects his friend of a want of candor in his bedside talk. The little talks outside his door, the ruses of his wife to gain a little private conversation with the doctor, excite his anger. He listens for the noise of the wheels after his friend has left the room, and, if the sound of his chariot is too long delayed, he feels sure that the long-suffering man is delaying at the door to tell what he 'really thinks,' and he takes pains to interrupt the conversation by some abrupt message; perhaps, if it happens to be evening, by saying that it is time to close the house for the night.

"But if he is critical and somewhat skeptical, he learns to know his physicians by their steps, and even the roll of their carriages on the street; and no patient gives them a more cordial welcome, or parts with them more reluctantly. He feels sure that his memory of their kind attentions certainly must be longer than that of certain patients who, according to the familiar lines, whose truth is too often confirmed by experience, forget even the doctor's face when they have recovered.

"He seldom escapes making himself disagreeable to his nurses. It is hard to convince him that it is his own fault that his food does not taste as it ought. He is indignant that his own kitchen can not produce broth as good as that of his neighbor: but the tales of his own peevishness, when he hears them after recovery, he can but believe are grossly exaggerated.

"Nothing is more surprising to the doctor, when reduced to the position of patient, than to find that he himself is subject to like weaknesses as other members of the human family. The nervousness, for which, in others, he has had too little sympathy, shows itself in a thousand ways. The little noises impossible to avoid disturb him, and the children of his household seem most unruly. Most strange of all, and most humiliating in his remembrance afterward, he even calls his doctor for nothing. He wakes from sleep, sure he is going to have a chill, or some equally unpleasant manifestation, and when, with grave face and careful attention, his hastily summoned physician has felt his pulse, taken his temperature, and sought for the signs of any possible complication, to inform him at the end that there is nothing to justify his fears, he admires and is grateful for the patience that has borne with his apprehensions, but he feels great curiosity to know what his doctor says to himself as he goes home to resume his broken sleep; and, most of all, he wonders at himself and mutters, 'Is thy servant a dog, that he should have needlessly disturbed a doctor's sleep?'

"But especially trying to an invalid doctor is a tedious convalescence. His knowledge of the possible complications and sequelæ gives a wide field of possibilities, over which his imagination wanders uncontrolled, and he is fortunate if he does not become a hypochondriac. He is pretty apt to partake of the lay fondness for talking about the unusual features his case has shown. If he thinks about the matter at all, he finds how difficult it is to know at what length to detail his symptoms to inquiring friends. Unless he keeps his tongue in due subjection, he is apt to realize that few men are really good listeners, and his kind friends, when they are released from his story, may be excused if they say, 'Poor fellow, he needs bracing up.' But really there is some excuse for him if he is a little garrulous; personal experience of pain is different from looking on, but, interested as he is in his own closer acquaintance with disease, his account of it differs little, in the ears of his medical brethren, from the story they have often heard before.

"But a little personal experience of the sick-bed teaches the doctor many things. He certainly learns that a sick man does not looks upon things as a well man does, and his charity toward an invalid's whims is greatly increased. He can not fail, too, to be touched and softened by the many kind inquiries and pleasant messages that come to him. Busy men come and sit down beside him as though the dearest object of their hearts was to see him recover; men who justly plead bodily infirmity as an excuse against the slightest exertion climb his stairs to express their sympathy, and patients who have seemed thankless and forgetful show that they needed only the opportunity to show their gratitude. And, when the sick man resumes his place in life, he is pretty sure to have not merely an increased enjoyment in living, and a better idea of his fellow-men, but also a higher estimate of the value of his own profession."

Medical Incomes in Canada.—The "Evening Post" quotes from the "Toronto Globe" as follows: "There is only one medical man in this city who last year earned $5,000 from his profession, combined with the interest he received on his previous savings. There is not one man on the list who had $4,000, and only four who touched $3,000. When we come to the comparatively modest and moderate $2,000, we naturally conclude that we shall have a full legion. But no, we have only fourteen all told who come up to this figure. When we come to between $2,000 and $1,000, the number becomes encouragingly large As many as fifty-one of the best-known and greatly-sought-after doctors of our city are put down under their own hands and seals as having last year lived on from $1,000 to $1,800. Some of these are professors. There remain only the unfortunates who worry along with from $800 down almost to zero. Of these, we are sorry to say, there were last year thirty-six."

The Limitations of Medical Science.—The "Boston Advertiser" says: "A physician of large experience remarked the other day that when he began the practice of medicine he was worried because people put so little confidence in him, and now he was troubled because they trusted his judgment so implicitly. He seemed to think that to be thought infallible was far more burdensome than to have one's fallibility emphasized as in his younger days."

A Test of Corning's Method of prolonging the Anæsthetic Effect of Cocaine.—Dr. M. D. Hoge, Jr., of Richmond, Va., concludes an interesting paper on the "Therapeutics of Cocaine," read before the Richmond Medical and Surgical Society ("Virginia Medical Monthly"), as follows:

"Determined to test the methods of Dr. Corning, Dr. McCarthy injected a half grain in ten minims of water in my right forearm on the radial side. This was followed in five minutes by exsanguination of the arm from the fingers, making a long skip with the bandage at the point of injection, and compressing the brachial artery above the elbow. Before applying the bandage, the area of anæsthesia was 1 x 1½ inch; twenty minutes later, after compression of the artery, it was only 1¾ x 3 inches, which gradually diminished. After the effects of this had worn off, the brachial artery was compressed above the elbow, and *one quarter grain* injected into the ulnar side. Twenty minutes later a large sewing needle was inserted one inch straight into the arm without the least pain. Thirty minutes after the injection, the anæsthetic area was 5 x 8 inches for superficial and deep pricks of the needle. This method seems to have decided advantages over the first. In order to see what effect a deep injection would have, the artery was compressed as before, and the hypodermic needle inserted one inch straight into the tissues, and then one quarter grain slowly injected. Eight minutes later, the anæsthesia had only a diameter of half an inch long. In testing the sensibility in this experiment, the ulnar nerve was evidently injured, as proved by the fact that, on introducing the needle, an intense pain shot down the ulnar side of the arm, and that side was perfectly numb for more than forty minutes. As the area of insensibility did not extend, and the soreness of the flexor digitorum communis increased, this method of very deep injection was abandoned.

"The opposite of this was tried—namely, a very superficial injection of one quarter grain just under the skin after compressing the artery. The area was long and narrow. Six minutes after injection, it measured 2 x 3½ inches; fifteen minutes later, 2 x 6½ inches."

THERAPEUTICAL NOTES.

Viburnum Prunifolium as a Preventive of Abortion.—Chéron ("Gaz. de gynécologie," July, 1886) recommends the following:

Tincture of viburnum prunifolium	40 minims;
Elixir of garus,* Simple syrup,	each 1 ounce;
Distilled water	2 ounces.

A tablespoonful every hour, or half hour, as required.

A Soothing Injection for Acute Vaginal Inflammation.—Trousseau (*Ibid.*) is credited with this combination:

Belladonna leaves, Stramonium leaves,	each ½ ounce;
Water	1½ pint.

Boil away one third of the water and then add thirty drops of laudanum. In cases of carcinoma uteri, where the pain is excessive, two or three drachms of laudanum may be used.

An Emmenagogue Powder.—Potain (*Ibid.*) uses this formula:

Powdered artemisia leaves, Powdered milfoil,	each 38 grains;
Powdered saffron	19 "

Mix and divide into five powders. In cases of amenorrhœa, give one powder daily for five days before the expected period.

A Remedy for the Pigmentation of Pregnant Women.—Monin (*Ibid.*) recommends the use, night and morning, of an ointment having the following composition:

Cocoa-butter, Castor-oil,	each 2½ drachms;
Oxide of zinc	3⅛ grains;
White precipitate	1⅔ grain;
Essence of roses	10 minims.

Hæmostatic Pills.—To Huchard (*Ibid.*) is attributed this formula:

Ergotin, Sulphate of quinine,	each 30 grains;
Powdered digitalis, Extract of hyoscyamus,	each 3⅛ "

Make twenty pills. Dose from five to ten daily in cases of metrorrhagia.

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* Consisting of the compound tincture of saffron and an aromatic. The former contains aloes, saffron, cinnamon, cloves, and nutmeg, and is used as a stomachic.

Lectures and Addresses.

MEDICINE IN THE UNITED STATES,
AND ITS RELATIONS TO
CO-OPERATIVE INVESTIGATION.

The Annual Address in Medicine delivered before the British Medical Association, Wednesday, August 11, 1886.

BY JOHN S. BILLINGS, M. D., LL. D. EDIN.,
SURGEON, UNITED STATES ARMY.

MR. PRESIDENT AND GENTLEMEN OF THE BRITISH MEDICAL ASSOCIATION: You all know that the representative of the American medical profession first selected by your executive committee to deliver the address in medicine to-day was the late Dr. Austin Flint, Sr., of New York, whose death last March is, therefore, a great and direct loss to you as well as to America. Every English physician knows Dr. Flint by reputation and through his writings; but only those few of you who were so fortunate as to know him personally can fully appreciate the magnitude of the loss which the medical profession has sustained in his death. This is not the time and place to attempt to pronounce a fitting eulogium upon him and his work, and I shall, therefore, only say that my deep personal sorrow for his removal is mingled with sympathy for the members of this association, who have been thus deprived of the pleasure of hearing him state in person some of the results of his long and wide experience. The loss is not a total one, it is true, since he had, fortunately, completed his address on "The Medicine of the Future," which has been published, and has, no doubt, been read by all of you; but in this case the printed page is by no means a satisfactory substitute for the spoken word.

In accepting the request, with which I have been honored by your Council, that I should attempt to take his vacant place on this occasion, it is with a full understanding of my inability to fill it that I stand before you. The request came at a time when I was hard pressed by official duties, and had neither leisure nor opportunity to undertake any special research; hence, to avoid violating one of my favorite Scotch maxims, viz., "That which you do not know, tell that not to any one," it was necessary to select some subject to which I had already given consideration, and which at the same time would probably be of interest to English physicians. Reflection on these restrictions soon brought the field of selection into narrow limits, almost into "a small intercept of space of one dimension," as a mathematician would say.

What is the significance of this invitation extended for the first time to a physician of another country, and that country the United States, to come to this annual gathering of the medical men of Great Britain and give the address in medicine? Does it not mean recognition of the unity of medicine, of the utility of co-operation, of the fact that we have common interests, and that the time has come when it is desirable to hear from the outlying younger branch of the family with a view to mutual pleasure and profit in the future? So it seems to me; and I propose, therefore, to call your attention briefly to some points relating to the present condition and future prospects of medicine in the United States, and to the direction in which you may reasonably hope and expect from that country in the future the most useful co-operation in the improvement of medical science and art. I believe that these must be matters of interest to you, and that I can perhaps make clear certain peculiarities which do not seem to be so generally understood on this side of the Atlantic as it is desirable that they should be, to insure sound judgment upon some of the results observed.

In the first place, permit me to call your attention to the fact that it is hardly possible to make any statements with regard to medicine in, or the medical profession of, the United States as a whole, which shall be definite and at the same time distinctive; that is, which will not apply almost equally well to medicine and the medical profession in other countries. This is due to the fact that there are great differences in the organization of the profession in different parts of America, so that what is true of one State would not be true of another; what is required as to fitness or qualification to practice in one place is not required in another; and the country covers so many parallels of latitude and meridians of longitude, making the conditions of life so diverse, and producing such differences in the prevailing diseases, that a man who is fairly qualified to practice in one section may be poorly fitted to treat the endemic diseases of another.

As, in painting a picture, it is best to locate and define the shadows first, and deal with the lights afterward, let us begin by considering some of the things that American physicians complain about; in other words, some of their supposed grievances. One of these is that the profession is overcrowded; that there are too many doctors, both *in esse* and *in posse*, and that this is due to too low a standard of education, and to the want of legal restrictions as to the qualifications which shall give a man the right to practice. The feelings of some of our physicians on this subject are in full accord with those of the good old New England deacon who told the village scapegrace seeking admission that he thought the church was about full.

Now, what is the number and distribution of medical men in America? Statistics gathered in 1883 * showed that in the United States and Canada there were 90,410 persons calling themselves physicians, being in the proportion of 1 to every 600 of population. In Canada alone there were 3,487 physicians, or 1 to 1,112 of population. If we take the figures of our last census, of 1880, the proportion of physicians reported is 1 to 589 of population, or 17 to 10,000. In England and Wales, by the census of 1881, the proportion of physicians is only 5·8 to 10,000; but these figures are not properly comparable with those of the United States, because they do not include unregistered persons. If the same classes were included that are counted in the United States report, I presume that the proportion would be about 9 to 10,000, or a little more than half that in the United States.

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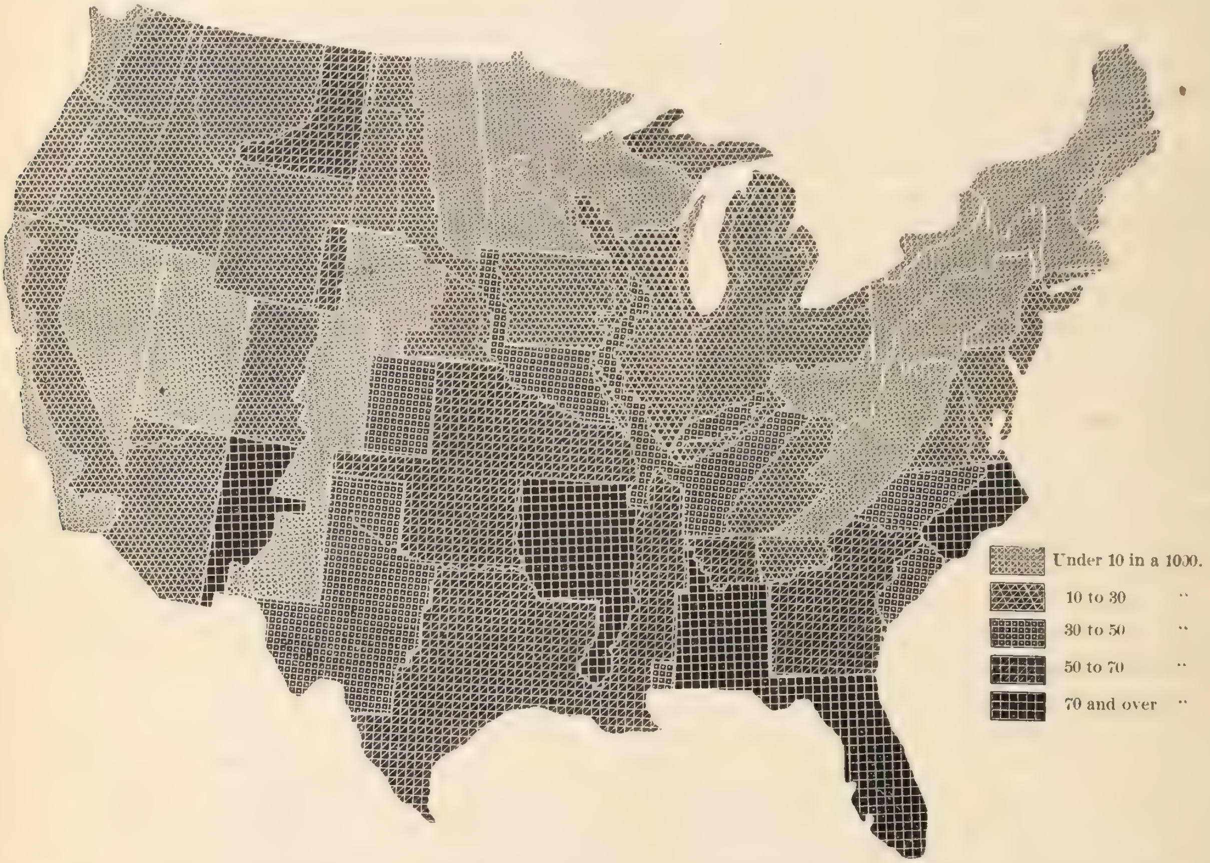
* Illinois State Board of Health Report, 1884.

In the United States the proportion to the population of those who call themselves physicians varies greatly in different localities; thus, in Colorado there are 29·3, in Indiana 25·2, in Oregon 24·3, and in Arkansas 23·5 to 10,000; while in New Mexico there are only 6·6, in South Carolina 9·2, and in North Carolina 9·7 to 10,000.[*] It is not easy to give satisfactory reasons for these differences; we can only say that they do not depend to any great extent upon local legislation. The proportion of physicians is generally lowest in the Southern States lying east of the Mississippi, and highest in those regions where immigration has recently been active. If we compare, by localities, the proportion of physicians to the population with that of clergymen and lawyers, we find some curious differences. It seems that the lawyers in the United States number 12·7, while in England and Wales they are 6·6 to 10,000, but that on the other hand the clergymen are 14·6 in England and 12·8 in the United States to 10,000 of population. In many instances it seems that where the lawyers are most numerous the supply of clergymen is smallest. I believe that a fair proportion of physicians to population is about 1 to 1,000, which is not far from the actual proportion in England, while the true proportion of practicing physicians in the United States is about 1 in 750. We must admit, then, that there is at all events no scarcity of physicians in the United States, and, as we have over eighty medical schools at work, besides a fair proportion of medical immigrants, there is no immediate danger of any interruption to the supply.



Map of the United States, showing the distribution of deaths from malarial fever as compared with deaths from known causes. Census of 1880.

Let us now consider the second head of the complaint—viz., that the standard of education is too low. There is ground for this, considered with reference to some localities, but not for others. I said a moment ago that a man might be fairly qualified for practice in one part of the country and yet find himself at a loss in another. This needs a little explanation, which I can, perhaps, give most easily in connection with a map of the United States, which I here show you. This map, which was prepared for a very different purpose, indicates, by different shades of color, the relative proportion of deaths reported as due to malarial disease to the total number of deaths in different parts of the country, for the census year 1879–'80. You will note how comparatively light the tint is in the north and northeast, and how dark the shades become in the south and in the valley of the Mississippi, thus indicating the great differences which exist as to the prevalence and deadly effects of the malarial poison in different sections of the country. It is in some of these low bottom-lands and swampy districts that we meet with cases of congestive chills and of malarial hæmaturia—cases in which the patient has been described as being "a mere appendage to a huge malarial entity, an incident of a miasmatic cataclysm." Furthermore, this strip of land bordering on the Gulf-coast is in the yellow-fever zone, and has heretofore been repeatedly desolated by this pestilence.

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[*] A map of the United States was here shown, on which the proportion of persons calling themselves physicians to the population in the several States was indicated by different shades of color.

As compared with the North and East, much of this malarious region is a thinly settled country, an almost purely agricultural country, and not a rich country. I need hardly tell you that the physician who has received his chief clinical instruction in the office of his preceptor in Vermont or New Hampshire, supplemented by distant glimpses of a few cases in hospital in Boston or New York, will find himself at a loss at first in dealing with the emergencies of daily practice in Arkansas and Mississippi. He will be subjected to influences which at times are dangerous to one who is not acclimated, and which tend to produce depression of spirits, want of energy, and bad health. He will not have free and constant access to scientific companionship, nor be stimulated by the influence of learned societies, and he can not avail himself of the ordinary sources of amusement, education, and rest, such as art galleries, the drama, libraries, and museums, etc., which are found in the large cities. Moreover, the pecuniary reward which the practitioner in many of these places can reasonably hope for is comparatively small.

Taking all these things into consideration, it is clear that if a man, after spending from six to eight years, and from one to two thousand pounds, in acquiring such a general and professional education as it is now considered that a skilled physician should possess, then settles in such a region with the prospect of an average income of from one hundred and fifty to two hundred pounds a year, it is not from pecuniary motives alone. There are such men in such places—men who are not only highly educated and skilled practitioners, but who are also original investigators and thinkers. It was within the limits of this malarial shadow that the foundation of modern gynæcology was laid by Marion Sims, of abdominal surgery by McDowell, Battey, and Gross, of an important part of the physiology of the nervous system by Campbell. Nevertheless, the rule holds good that malaria and science are antagonistic; the exceptions prove the rule.

Nor can the inducements for highly educated physicians to settle in thinly settled localities be made stronger by any form of penal or restrictive legislation. Any attempt to fix a standard of requirements or qualifications for practice which shall be the same for such rural districts and for the large cities and manufacturing towns must result in the adoption of what competent judges would consider so low a standard as to be ridiculous and useless. The demands are widely different, and corresponding differences exist in the sources of supply—that is, in the medical schools.

There is a class of medical schools in the United States whose object is to give the minimum amount of instruction which will enable a man to commence the practice of medicine without much danger of making such serious and glaring blunders as will be readily detected by the public. There are other schools whose aim and object is to make fairly well trained practitioners, the general character of the instruction given in these being substantially the same as that given in your English hospital medical schools. The results of such a three years' graded course of instruction in medicine as these schools furnish depend upon the character of the material upon which they work; that is to say, upon the general preliminary education possessed by the student at the time of his matriculation. This is evidently too often defective, and only a few schools have thus far ventured to establish any standard of preliminary examination which at all approaches in its demands that which is required in England. The proverb that it does not pay to give a five-thousand-dollar education to a five-dollar boy is clearly of American origin, and sums up a great deal of experience.

You have nineteen portals of entrance to the profession, and have not found it easy to keep them all up to the standard. In America we have over eighty gates and a number of turn-stiles, and a good deal of the ground is uninclosed common. Many of our physicians are more or less dissatisfied with this state of things and with the results thereof, and every year in some States efforts are made to secure legislation which it is supposed will protect the interests of the profession, though those who advocate such legislation are usually prudent enough to allege as their only motive a desire for the protection of the public.

Now, how does this free trade in medicine and the low standard of qualification, or no standard at all, required by law affect practitioners as individuals? To answer this we must divide the profession into several classes. In the first place, in all our cities, great and small, there is a large class of physicians who are as well educated and as thoroughly competent to practice their art as can be found in the world. They have studied both at home and abroad, have had extensive clinical training, are always supplied with the latest and best medical literature and the most improved instruments, and many of them are connected with hospitals and medical schools. Among them are found the majority of our writers and teachers, and the successful men are the survivors of a struggle in which there has been keen and incessant competition. These physicians, whose positions are fairly assured, and who, as a rule, have all the practice they desire, are not usually active leaders in movements to secure medical legislation, although they passively assent to such efforts, or at least do not oppose them; and their names may sometimes be found appended to memorials urging such legislation. They are clear-headed, shrewd, "practical" men, who know that their business interests are not specially injured by quacks and ignoramuses; rather the contrary in fact, for they are called on to repair the damage done by the quack to people who have more money than brains; and they are not inclined to risk the fate of the Mexican donkey who died of "*congojas agenas*"—that is, "of other people's troubles."

Then there is another large class of honest, hard-working practitioners who rely more on what they call experience and common sense than on book learning. Many of these have obtained assured positions of respectability and usefulness, and are comparatively indifferent to medical legislation so far as their own interests are concerned. Others, however, who are not so successful, feel the competition of the local herb doctor or of the traveling quack more keenly, and have more decided views about the importance of diplomas. Among these are the young men who have not yet acquired local fame, and who are apt to become very indignant over the doings of some charlatan in the neighborhood, or of some druggist who prescribes over his counter. These last are usually quite clear in their minds that the State ought to interfere and prevent injury to the health of the people.

I have known two unsuccessful physicians who finally abandoned practice and who gave as a reason for their failure—one that "he did not know enough," and the other that "he had not the manners and tact which would inspire confidence in his patients"; but such frank-speaking men are rare.

Thus far, as a rule, the efforts which have been made to secure legislation upon medical matters in America have come from the profession itself and have been chiefly urged and recommended by physicians. The general public, and even the educated public, has shown very little interest in the matter. It does not demand protection against ignorance, but intrusts the care of its health and the lives of those who are nearest and dearest to it to almost any one who announces himself as prepared to take charge of them. The number of those who profess to practice medicine in the United States and are not qualified to do so is undoubtedly large, though by no means so large as one might suppose after listening to the impassioned eloquence which is duly aired every year upon the subject. There are some advertising charlatans, and traveling quacks are occasionally to be met with, but they are rare.

The most rigid tests of qualification, in our profession, in the United States are those required of candidates for admission into the medical departments of the army and navy. The standard established for these is about the same as that for the corresponding corps of the English army and navy; and, of the candidates who apply, from 70 to 80 per cent. are rejected.

Certainly we must admit that this percentage indicates an unsatisfactory state of things. But what evidence have we as to its results upon the health and life of the people? What shall we take as the measure of the difference of skill in physicians? The death-rate? If we compare the death-rate of the United States with those of other civilized countries, we find that it is as low as any with the exception of Sweden. Does a low death-rate mean better sanitary condition or more skill among the doctors? For the last twenty years the death-rate has been diminishing in England; the average amount of life for each person here has been increased, but I observe that the sanitarians claim this as proof of the value and importance of their efforts, and that nothing is said about its being in any way due to increase in medical skill or to improvements in medical science. Evidently this test is not a convincing one. Almost the only matter in which figures seem to demonstrate the importance of superior medical education and skill is in the statistics of death due to childbirth and of the results of surgical operations.

The proportion of deaths from childbirth to the number of births is decidedly greater in the rural districts than in large cities, and among the colored than among the white population. If this difference were found only in the United States statistics, it might be accounted for by the differences in the trustworthiness of the sources from which the data are derived; but we find similar differences in England, and we must admit that these are probably largely due to the fact that in cities labor cases receive more prompt and efficient professional care than they do in the country. I need hardly call your attention to the results of antiseptic surgery, or of modern abdominal surgery, as compared with those of twenty-five years ago. Here there can be no question as to the improvement. It is well to remember in this connection that whatever undue prolongation of disease or unnecessary mortality is due to want of skilled medical treatment occurs mainly among the wage earners, the farmers, mechanics, salesmen, needlewomen, etc., and not among the rich, nor yet among the very poor.

Now, seeing that really efficacious legislation with regard to medical education or to the practice of medicine must, like all efficacious legislation, be substantially in accord with public opinion, since it is impossible to continue to punish for any length of time that which public opinion does not condemn, and as the great mass of the people of the United States have not as yet had such evidence as they can understand, and which would thoroughly convince them that it is to their interest to suppress quackery, it follows that it is necessary to go slowly and to allow such evidence to accumulate.

To me it seems that the most important of the first steps to be taken in this direction is one which has already been taken in Great Britain—namely, the requirement that every death in the community shall be registered, and that in such registration satisfactory evidence shall be given as to the cause of death, sufficient at least to prove that such cause is what is known as a natural cause—that is, that it is not due to crime. When it is admitted that one of the duties of government is to provide for such registration, both in the interests of life and to secure the rights of property, it follows, necessarily, that those persons whose certificates as to the cause of death are to be accepted as satisfactory evidence that there has been no foul play must present evidence that they are properly qualified to make such certificates. The principle is precisely the same as that which induces a government to provide for the examination of the medical men whom it employs in its army and navy.

So far as the art of medicine is concerned, the demand has much, though by no means all, to do with regulating the quantity and quality of the supply, and there are few localities in the United States where the qualifications of the medical man are not fully up to the standard which the community is able to appreciate and is willing to pay for. In the natural order of things suffering and death are the remedies for ignorance, weakness, and vice, and the means of preventing the transmission of these characteristics to offspring. These remedies, though effectual, are drastic, and we do our best to avoid them, but perhaps it is well that the penalties can not be done away with altogether.

The laws regulating the practice of medicine in the United States are all State laws. If we judge only from what may be found in the statute-books, assuming that all the laws contained therein are duly enforced, we shall find that nearly two thirds of the States have laws ostensibly regulating the practice of medicine within their borders. As a matter of fact, however, in over half the States which have laws on this subject no attempt is made to enforce them, and in almost all of them the possession of a diploma, no matter from what source derived, is all that is required.

Of the various methods which have been tried in different States to insure by law that physicians shall be properly qualified, I will call your attention to two which are of special interest. The first is that of Alabama, the principle of which is to organize the whole medical profession of the State, and use it as the means of regulating the qualifications of practitioners and of caring for the public health. The Medical Society of the State of Alabama, with its branches, the county medical societies, thus forms a part of the machinery of the Government; it appoints boards of medical examiners, selects State and county sanitary officials, supervises the registration of vital statistics, the administration of quarantine, etc.—in short, it is the State board of health, and the county branches are the county boards of health. In this State the possession of a diploma does not give the right to practice; it simply enables the owner to go before the examining board. The examinations before the county board are partly in writing, and are subject to review by the State board, which has in some instances publicly condemned the local examinations as not sufficient. This system has now been in operation nine years, and has gradually been consolidated and improved by educating local boards, and getting all physicians interested in it, until it is now working fairly well. Much remains to be done, and it is too soon to predict results; at present the success of the system is largely due to the wisdom and energy of one man, who has given his whole time and labor to the work, and it remains to be seen whether the machine which he has built will work well without him.

The second system to which I will call your attention is that of the State of Illinois, which was commenced in 1877, or about the same time as that of Alabama. In Illinois any one who presents a diploma, or license to practice, from a legally chartered medical institution in good standing, is entitled to practice, and the State Board of Health is to decide as to what shall constitute "good standing." The Board of Health also examines all persons who do not possess satisfactory diplomas, and who nevertheless wish to practice in this State.

One of the greatest practical difficulties in the way of providing any system of State examinations in medicine in the United States is that public opinion will not support any law which can be supposed to condemn, or in any way to injure, homœopathic and eclectic practitioners or their schools, and hence any proposed law relating to medicine, or to the organization of State boards of health, which does not recognize the existence of these sects will, in many States at all events, meet with enough opposition to defeat it. In Illinois this difficulty was surmounted by the arrangement that, of the five physicians on the board, one should be homœopathic and one eclectic. The Kansas law, passed last year, goes further in this direction, and provides that appointments must be so made that no school of medicine shall ever furnish a majority of the members of the board. Much to the surprise of many, the Illinois plan has worked very well—there has been no quarreling in the board—and the homœopathic and eclectic members seem to have upheld quite as high a standard of qualification as their fellow-members. The results of the work in Illinois have been very good. A large number of ignorant charlatans were forced to leave the State. The requirements of the board as to what shall constitute a medical college in good standing have been raised, and it has thus caused improvement in the medical schools, not only of Illinois, but of other States. Moreover, the neighboring States have been stimulated to action, not only by the force of example, but because they received the men who had been driven out of Illinois, and found the accession an unpleasant one.

As in the case of Alabama, it is too soon to judge definitely of the results; and in Illinois, also, the satisfactory working of the system is largely due to one man, the secretary and executive officer of the board, who has given his entire time to the work. I do not, by any means, wish you to suppose, however, that I consider this as being a serious objection to this or any other plan, for, in the building up of any organization, or the carrying out of any system, much must always depend upon some one man.

The relations of the United States Government to medical education and to the practice of medicine are indirect only, the regulation of these matters by law being part of the police power which, under the Constitution, is reserved exclusively to the individual States. The United States employs physicians in its Indian Department, in the Pension Department, in the Marine-Hospital Service, and in the medical departments of the army and navy, and it has power to regulate the practice of medicine in those territories which are not yet organized into States, and also in the District of Columbia; but thus far it has made no use of such power. The qualifications of physicians employed in the army and navy and in the Marine-Hospital Service are determined by examinations made by boards of medical officers belonging to those services. The possession of a diploma from a respectable medical college is a prerequisite for such examination, but beyond this it does not count; that is to say, the examination is the same for the holders of all diplomas, and covers all branches of medicine. But, while the relations of the general Government to medical education are thus indirect, they have of late years become of very considerable practical importance, and are now exerting much influence upon medical investigations and literature. This is being effected by the museums and libraries which are now being formed under the auspices of the Government at Washington, and also, to some extent, by certain special investigations undertaken by the Government in the interests of preventive medicine. Of these various agencies one of the most important is the library which has been formed at Washington, under the auspices of the medical department of the army in connection with the Army Medical Museum, both of these institutions being a part of the results of the late civil war. The museum was at first formed to illustrate military medicine and surgery, giving the results, primary and secondary, of injuries inflicted by modern weapons of warfare and of the diseases of armies in the field; in which direction the collection is unrivaled in extent and completeness. Gradually its scope has been enlarged to include illustrations of anatomy, development, and all branches of pathology and therapeutics, so that it is fast becoming a museum covering the whole field of medical science. In like manner the library, which commenced in a collection of those books relating solely or especially to military medicine and surgery, which were required in the compilation of the "Medical and Surgical History of the War," has expanded into a great medical library, which is now one of the best practical working collections of the kind in the world. These collections, then, no longer appertain exclusively, or chiefly, to the business of one department, but belong to the whole profession of the United States as a body; and the department which has charge of them is managing them from this point of view. The influence of the library in stimulating research, and upon the quality of medical literature, is already very perceptible, and is destined to increase with advancing years. I think I may also venture to state that the utility of these collections, and especially of the library, is by no means confined to the medical profession of the United States, for the catalogues and indexes which are being issued in connection with them are of service to medical writers and teachers all over the world.

As regards investigations into the causes of disease, undertaken at the expense of the general Government, only a beginning has as yet been made; but it is sufficient to indicate future possibilities and probabilities. The main importance of the work of the National Board of Health, which was organized in 1879 under the stimulus of the great yellow-fever epidemic of the previous year, was due to investigations upon the causes of yellow fever and diphtheria, the relations of soils and of water-supply to certain diseases, etc., investigations of the same general character as those which are being prosecuted under the auspices of the Local Government Board in this country, and of the Imperial Board of Health of Germany. It is true that, owing to circumstances which I can not here explain, the work of the National Board of Health has been stopped; but there is every probability that it will be resumed, with perhaps some change of organization, at no distant day, and I need not dwell upon the vast importance to medical science of organized and systematic work in this direction. Similar investigations have been undertaken by State boards of health, and especially by the State Board of Health of Massachusetts, and the fact that governmental health departments are tending to work in this direction is significant as to future co-operation from such sources.

In this connection should be mentioned the National Museum of Hygiene, which has been formed under the direction of the medical department of the United States Navy, which is now one of the most instructive collections of the kind in the world, and has also connected with it an excellent library and a well-equipped laboratory.

Comparative and experimental pathology is also receiving attention from the Government under the direction of the Department of Agriculture, which is doing some good work in the investigation of the diseases of our domestic animals. Our investigators are, fortunately, not hampered by anti-vivisection laws, and there is little danger that they ever will be, for, though we have our due proportion of fanatics and seekers of notoriety who wish to emulate the British Antis-, their true motives are so well understood that they have little power to do mischief.

Of medical associations in the United States there are several classes. We have a few local societies, analogous to clubs in their organization, which own property in the form of buildings, libraries, etc., are somewhat conservative in their selection of members, and are only to be found in large cities. Of these, the College of Physicians of Philadelphia is the oldest, and has the largest and best library and museum; it will celebrate the hundredth anniversary of its existence next year. In New York the Academy of Medicine and in Boston the Medical Library Association are of the same character, and, in general, each large city has a similar society, although as yet they have not become fully anchored and established by the acquisition of property. The second class includes local societies devoted to specialties, such as pathology, obstetrics, etc. These also are found only in large cities, and as yet are few in number. Four of them only have published transactions. Corresponding with these are national societies devoted to specialties, such as gynæcology, ophthalmology, surgery, pathology and clinical medicine, etc. These societies meet annually, elect their own members, exercising care in the selection, and publish valuable transactions.

Another class is composed of the county medical societies, which strive to include all regular practitioners residing in their precincts. From these are sent delegates who form the State medical societies and the American Medical Association. The mode of organization varies somewhat in the different States, but the representative principle prevails in all. Most of these societies publish transactions, and the American Medical Association now has its journal.

As to the condition of medical science and art in America, it partakes of the general progress, for the press now makes all discoveries the common property of the civilized world. The marked feature of the present epoch is the recent advance in knowledge as to the relations between micro-organisms and certain diseases, and the strong stimulus which this has given to preventive medicine. Sanitation is becoming fashionable, and, if we may believe some of its votaries, it is a very simple matter to prolong the average lifetime to the scriptural "three score years and ten." All that is necessary is that everything shall be clean, and every person virtuous. Having learned to distinguish those diseases which can be prevented much more easily and certainly than they can be cured, we may turn them over to the sanitarian, who has his own battles to fight with ignorance and prejudice. If he succeeds, and so far as he succeeds, he will change, in certain respects, the work of the practitioner.

The lives which are saved from cholera and typhoid, from consumption and diphtheria, and from the acute specific diseases, will, at last, be weakened and destroyed in other ways. The work of the physician will not be lessened by preventive medicine; it will simply be required more for older persons, and for another class of diseases. As sanitarians must depend upon practitioners for much of the information which is essential for their work, it follows that if preventive medicine is to become a working power, it will bring the mass of the profession into closer relations with the State than its members have held heretofore. What these relations shall be is one of the most interesting, and, at the same time, one of the most difficult, of the many problems with which we, or our successors, must deal. I have referred to some experiments on this subject which are now being tried in America, where it is much easier to make such trials than it is in an older country hampered with vested interests. Just at present, in this, as in a number of other things, our tendency is toward centralization, both in the several States and for the whole country, and it is not improbable that we may go far on this road in the future.

I come now to the consideration of the second part of my subject—namely, the direction or manner in which we have reason to hope that medicine will be developed in the United States, and the kind of co-operation which you may reasonably expect to receive from the medical profession of that country. A marked feature of the present day, in medicine as in other things, is the tendency to specialization in study and in practice. But this very development of specialties, of increasing minuteness in the division of labor, increases the necessity for co-operation, and in fact tends to create what we may call the specialty of co-operation. Formerly a rifle, or a watch, was made by a single workman. No two instruments were exactly alike; each piece had its own individuality and was not interchangeable, and the cost of the whole was such as to put it beyond the reach of the multitude. Now the work on these things is greatly subdivided; one man makes only one small wheel, or spring, or pinion, and another another, each doing his work, according to a uniform pattern, rapidly, perfectly, and at comparatively small cost. But, in addition to the workmen who make the individual parts, it is now necessary to have one person specially skilled in making drawings and preparing patterns, another to assemble the completed parts, and a third to test the whole after it has been put together. As the centrifugal force increases, the centripetal power must also increase.

In one sense medicine, as we have it to-day, is the result of co-operation, not of deliberate, centrally planned, and direct co-operation, but of natural selection from results produced by many men, often working at cross purposes and, therefore, wasting much energy, but nevertheless working, though blindly, to a common end. And it is safe to predict that in the future much of the best work will be done in the same way, by individual effort inspired by the love of science, by personal ambition, etc. But the results obtained in this way come slowly, and some things that we want can hardly be obtained by individual effort, even if we were willing to wait; hence we must look to organization for help.

This is an age of machinery, of exchanges, of corporations, for all these correspond to one and the same fundamental idea. Men make machines to do what the individual can not do, and they make them not only of brass and iron, but of men, for such an obvious source of power to the man or men who can master the combination is not likely to be overlooked. One result of such organization is seen in our encyclopædic works on medicine, whether these be called dictionaries or hand-books; another in the great medical journals; another in associations which seek to wield political influence; another in the comparatively recent attempt at collective investigation of disease. With these may be classed also the attempts of government departments to make scientific investigations, to collect libraries and museums, to do things which require long continuity of effort on a definite plan in order to produce the best results. And it is by the combination of all these, with the efforts of individual workers, that substantial advance and improvement are to be effected. In this broader view of co-operation it is interesting to consider those fields of labor to which comparatively few physicians can devote themselves, because of want of time and opportunity, but whose proper working is, nevertheless, of the greatest importance to the practitioner.

One of these is experimental laboratory work, and in this direction the prospect of valuable contributions from America is now exceedingly good. Some of the wisest of our most wealthy men have shown their appreciation of the responsibilities which riches entail on their possessors by seeking new channels through which to benefit their fellow-men. While the old and well-known methods of endowing hospitals and charitable institutions are not neglected, there is apparent an increasing tendency to endeavor to promote the advancement of knowledge, and especially of such knowledge as tends to the mitigation of suffering and the improvement of the race, to furnish means for the investigation of disease, to provide laboratories, and to endow medical schools and thus place them beyond the reach of the temptations and difficulties which must always exist when such schools are dependent upon the fees of students, and are, therefore, practically commercial manufacturing establishments.

As illustrations of this tendency I may mention the bequest of £1,400,000 by Johns Hopkins to endow, in the city of Baltimore, a university and a hospital of which the medical department is to be a special feature, to be provided with the best laboratory and other facilities for original investigation as well as for teaching; the gift of Mr. Carnegie to the Bellevue Hospital Medical School of New York in the shape of a well-equipped pathological laboratory; the presentation by Mr. Vanderbilt, and members of his family, to the College of Physicians of New York, of £200,000, to provide for that school new buildings and clinics having the best means of teaching and research, and the endowment, by an unknown donor, of a laboratory for the University Medical College of New York, with the sum of £20,000.

Last year, in his retiring address as president of the New York Academy of Medicine, Dr. Fordyce Barker referred to this tendency to regard wealth as a trust to be used for the benefit of humanity, and, after sketching the requirements of the Academy on a scale which would require an endowment of at least a million of dollars, predicted that such an endowment would be furnished by wealthy citizens of the city. I believe that he was right, and that his prediction will become history.

As the class of men who have wealth, leisure, and knowledge becomes greater, there comes an ever increasing demand, not only for the best medical skill, for the most expert practitioner, but also for exhaustive research in every direction which promises to furnish new means for the prevention or relief of suffering, and for warding off, as long as possible, the inevitable end; and hence there is little reason to doubt that the examples I have named will be followed by others in the near future. With such opportunities, and under such conditions and influences, the stimulus to the young and ambitious worker is strong; we have abundance of material of this kind upon which the process of natural selection can operate, and there is little reason to doubt that the result will be substantial and valuable contributions to physiology, pathology, and therapeutics.

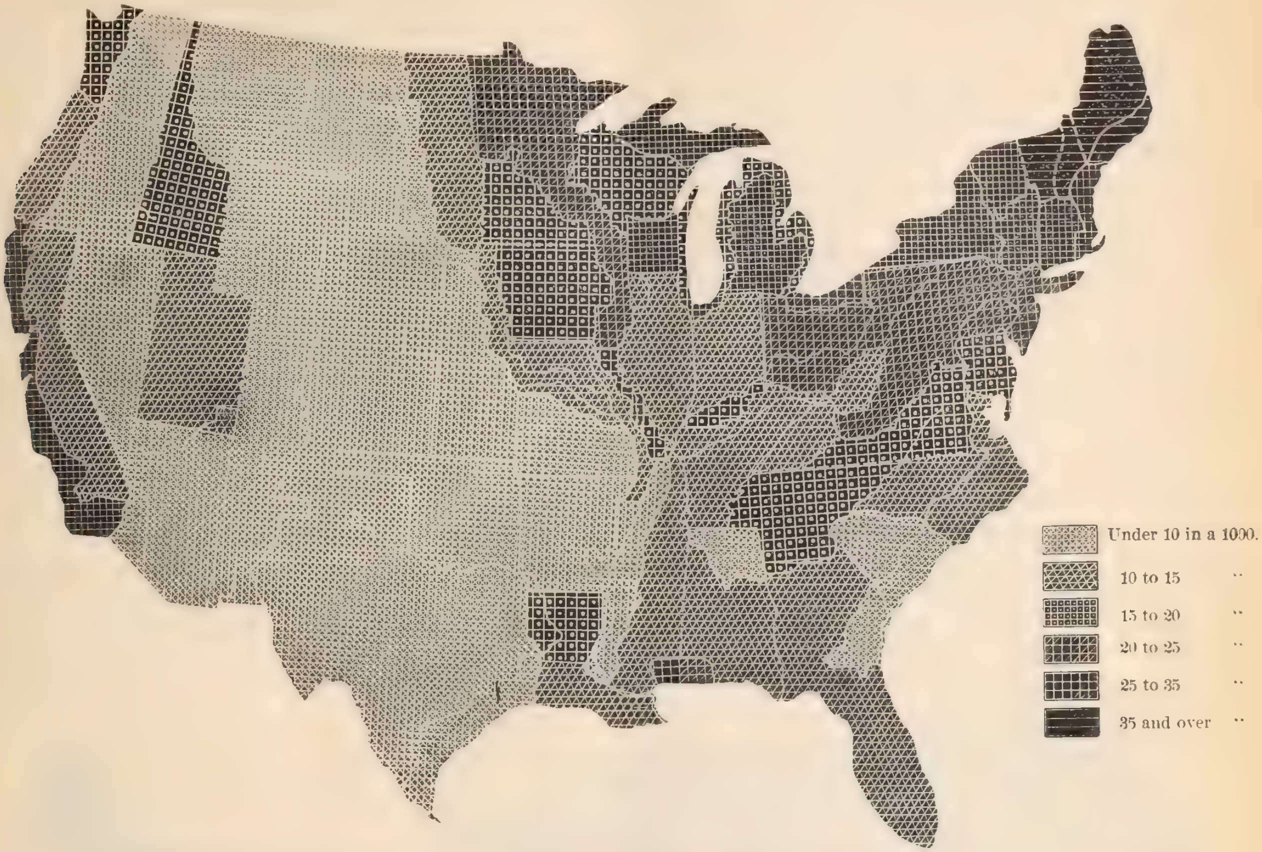
I have already referred to some of the work which has been undertaken by the United States Government for the benefit of medicine and of the medical profession in the formation of a library, and the providing of means of assistance in bibliographical research. There is another most important means of advancing medical and sanitary science which only a government can furnish, and in which field of work England now stands pre-eminent—I refer to vital statistics. In this field the United States Government has thus far done but little, yet enough to show the great interest and value of what we have a right to hope will be done in the future by combining the work of the several States. This is one of the fields in which international co-operation is most desirable; it alone can furnish data sufficiently complete and reliable for a scientific consideration of the relations of disease to geographical and race distinctions.

Geographical pathology is a very old branch of medicine—as old, at least, as Hippocrates, whose treatise on airs, waters, and places is justly famous. Permit me to remind you of its opening clauses: "Whoever wishes to investigate medicine properly should proceed to consider the seasons of the year and what effects each of them produces, the winds, the qualities of the waters, the situation and exposure of the city, the character of the ground, and the mode of life of the inhabitants." Then, says the wise old Greek, "From these things he must proceed to investigate everything else." There is a breadth of view in that last sentence which is particularly satisfactory. Since the days of Hippocrates there has accumulated a vast amount of literature relating to the supposed connection between the topographical peculiarities of different cities and countries and the diseases which prevail in them; but, when the books and essays which come under the heading of "Medical Topography" are examined, it will be found that the topographical part is much more complete than the medical—which last is mainly confined to the consideration of malarial diseases, and is vague and indefinite with regard to their relative prevalence.

Much the larger part of our really valuable information on this subject has been obtained within the last twenty-five years, as Professor Hirsch points out in the preface to the recent edition of his very valuable hand-book of geographical and historical pathology, and, while the contributions of the United States to this branch of medical science have been already important, I hope to be able to show you that they are probably destined to be of steadily increasing importance in the future. Considered as a body, the opportunities of the medical profession of the United States for the study of the manifold influences which can cause, modify, or prevent disease, are in some respects unequaled. As regards peculiarities of climate, soil, altitude, etc., the country is so large as to afford almost every variety of combination, so that nature may be said to be making a series of experiments, on a grand scale, upon the mass of huanity which is so rapidly increasing in the New World. Especially is this the case with regard to the problems of heredity as connected with the mysterious relations of certain forms of disease to race. America is at present the great mixing bowl into which are pouring streams of human life from origins the most diverse, from regions the most remote. Black and white, red and yellow, long skulls and short skulls, Celt, Teuton, and Slav are being brought together under similar conditions of climate, food, and occupation, thus permitting of the comparison and study of the different effects, if such exist, which result from variations in parentage under conditions of exposure to the same causes of disease. For a little time, a generation or two at least, the different streams remain pure, then there is more or less mingling, in some cases very little, in others very intimate, but always there is an opportunity of studying the races separately, as well as of investigating the results of their various mixtures.

To illustrate the possibilities in this direction, I will call your attention to some peculiarities in the distribution of deaths from certain causes in different parts of the United States, and for this purpose I shall make use of the data from our last census, taken in 1880. We have no general and uniform system of registration of births and deaths. The larger cities and about half a dozen States have such a system, but for much the larger portion of the country the only means which we have for determining differences in amount or causes of mortality in different localities is through the census, which is taken once in ten years. The data thus obtained with regard to deaths are imperfect, because when these are collected, only at the end of the year, about 30 per cent. of the deaths are unrecorded; and they are inaccurate, because the reports of the causes of death are not furnished by persons competent to give reliable information with regard to them. Nevertheless, these data are the best that we have, and, although for a large part of the country they do not give us the actual number of deaths from any cause or set of causes, they do furnish some interesting information with regard to the relative prevalence and importance of certain causes, and suggest questions and lines for future investigation, although they do not furnish definite and scientific answers.

Take, for instance, this map of the United States upon which, by varying shades of color, is shown the proportion of deaths reported as due to cancer, as compared with the reported deaths from all causes. Cancer, using the term in its broadest sense, is a disease which seems to be gradually increasing in frequency among civilized nations, and, possibly, to have a tendency to increase with the advance of civilization. In England and Wales the proportion of deaths from this cause seems to have nearly doubled within the last twenty-six years, and a similar rate of increase can be made out in certain parts of America. How far this increase is a real one, and how far it is due simply to improvement in diagnosis, is a question yet unanswered. The mortality from cancer in the United States is proportionately greatest in the New England States, somewhat less so in New York and Pennsylvania, and it causes the least proportion of deaths in the Mississippi Valley and the South generally. The proportion of deaths from cancer in the United States is somewhat greater than it is in England; but it is not possible to make any accurate comparisons in this respect. Now, why are the shades on this map so dark in the northeast and so light in the south? In the first place, cancer is a disease the mortality from which steadily increases with advanced age, as you may see from this diagram. Hence, cancer causes a higher proportion of mortality in those localities which have the greatest proportion of population living at advanced ages, and in the United States these localities are the New England States, as you will see by this map. One deduction from this, which may perhaps not have occurred to all of you, is that a large proportion of deaths from cancer indicates, to a certain extent, that the locality in which it occurs is a healthy and long-settled one, since it has probably a relatively large proportion of inhabitants, and especially females, of an advanced age. But another explanation of the peculiar shading of the cancer map is found in the relations of race to the tendency to death from this disease. The proportion of annual deaths from cancer to a hundred thousand living population was, in round numbers, twenty-eight for the whites and thirteen for the colored. That is to say, cancer is more than twice as prevalent among whites as it is among colored in the same localities, for these figures apply only to the South. On the other hand, cancer appears to cause a greater proportion of deaths in persons of Irish and German parentage than it does among the rest of the white population, the indications being that between the ages of fifteen and sixty-five the Germans are especially liable to cancer, more so than the Irish, and decidedly more so than the average white population. Now, when we remember that the greater part of the colored population is in the South, and the greater part of the Irish and German population is in the North, we have another reason for the differences in mortality caused by this disease in the two sections.

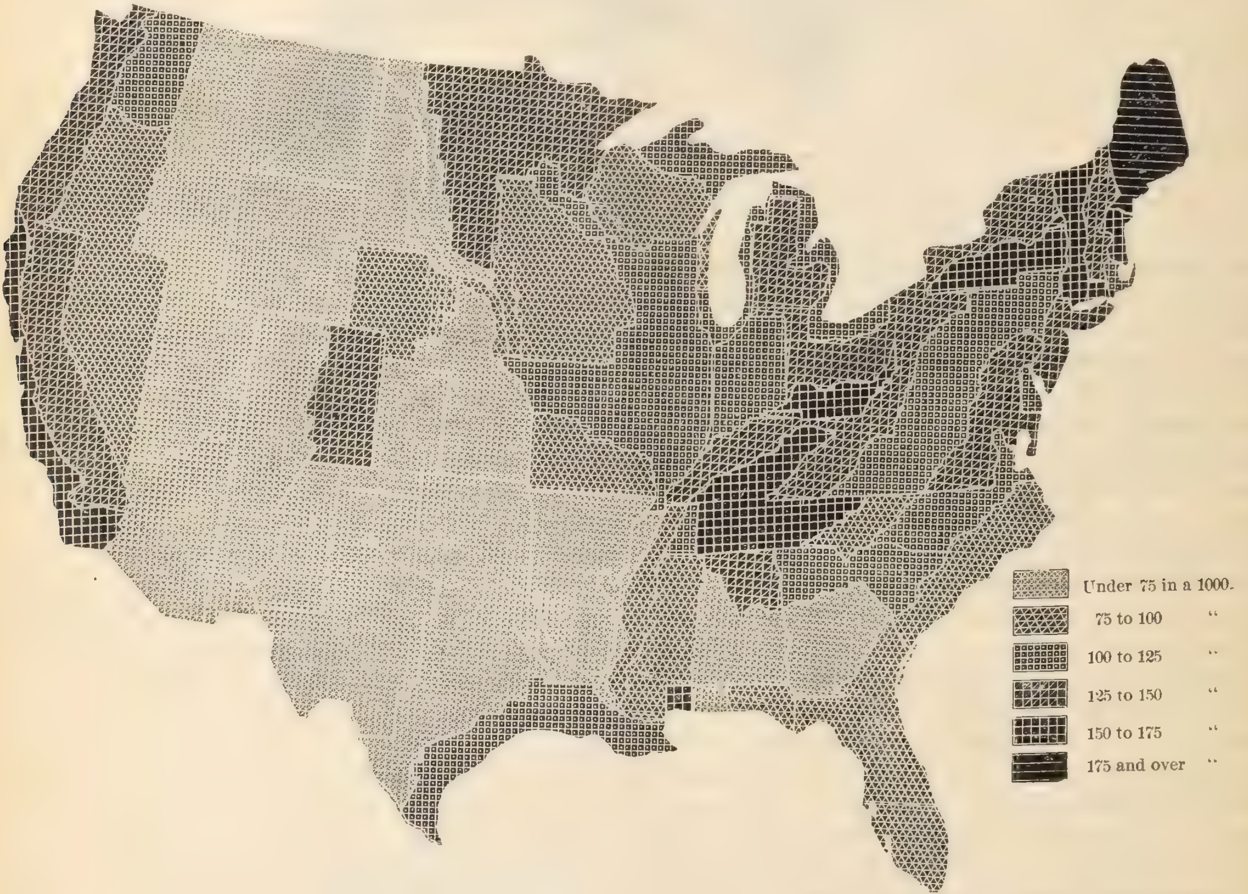


Map of the United States, showing the distribution of deaths from cancer as compared with total deaths from known causes. Census of 1880.

Again, take this map, showing the distribution of the deaths from scarlet fever during the census year. You see that this also was most fatal in the North, and here, again, the influence of race comes in, because in the negro race the mortality from this disease appears to be very low. This disease has always been much rarer in the South than in the North, and the contrast was much stronger in former years than it is at present; but this can not be explained solely, or even to any great extent, by difference of temperature, because scarlet fever has often been epidemic in the tropics, and, on the other hand, in many localities in temperate climates it is among the rarest of diseases.

Here is another map showing the distribution of deaths reported as due to diphtheria during the year. Diphtheria is a disease which has been unusually prevalent in the northern portion of the United States for several years. During the census year it caused 2,374 deaths out of every 100,000 deaths from all causes, while in England, for the year 1880, the deaths from diphtheria were 532 in 100,000 deaths from all causes; that is to say, the comparative mortality from this disease in England was less than one fourth that of the United States for the same period. Diphtheria, again, is essentially a disease of the North, but especially of the Northwest. It causes an excessive mortality in children of German parentage, sufficiently so to show that here again the influence of race comes into the problem, although, probably, only indirectly—that is to say, it is probable that it is the habits of a peculiar class of people which favor the propagation of the disease rather than any physical peculiarities in the structure of their bodies.

Two more illustrations of the geographical distribution of disease in the United States may be of interest in this connection. The first is that of consumption; the second of pneumonia. Consumption is a vague term, and, as used in the census, no doubt includes many cases which were not true tubercular phthisis. It is reported as causing 12 per cent. of all the deaths, or more than any other single cause. In England and Wales, in 1880, it caused a little over 9 per cent. of all the deaths. Such wholesale ratios are, however, of little interest or value. There are very great differences in the liability to this disease in different parts of the United States, as the map makes sufficiently evident, and it is from a study of the causes of these differences in the data derived from large masses of people, combined with clinical histories and experimental laboratory work, that we have good reason to hope to obtain knowledge, not only of the causes of this disease, but of better methods of prevention and treatment than are now at our command. It causes a greater mortality among the Irish than in other white races, and, perhaps, a greater mortality among the colored than among the white.



Map of the United States, showing the distribution of deaths from consumption as compared with total deaths from known causes. Census of 1880.

Next to consumption, pneumonia is reported as causing the greatest number of deaths in the United States during the census year, giving a ratio of 8·3 per cent. of all deaths, as against 4·8 per cent. in England and Wales in 1880. Here, again, the local distribution of deaths is interesting, and the contrast between the map of consumption and that of pneumonia is very striking. Here, again, we find that race peculiarity is an important factor in the problem, the proportion of deaths from pneumonia among the colored being much greater than it is among the white.

I have elsewhere commented more fully than it is possible to do here upon these peculiarities of the distribution of certain causes of deaths in the United States.[*] In fact, my

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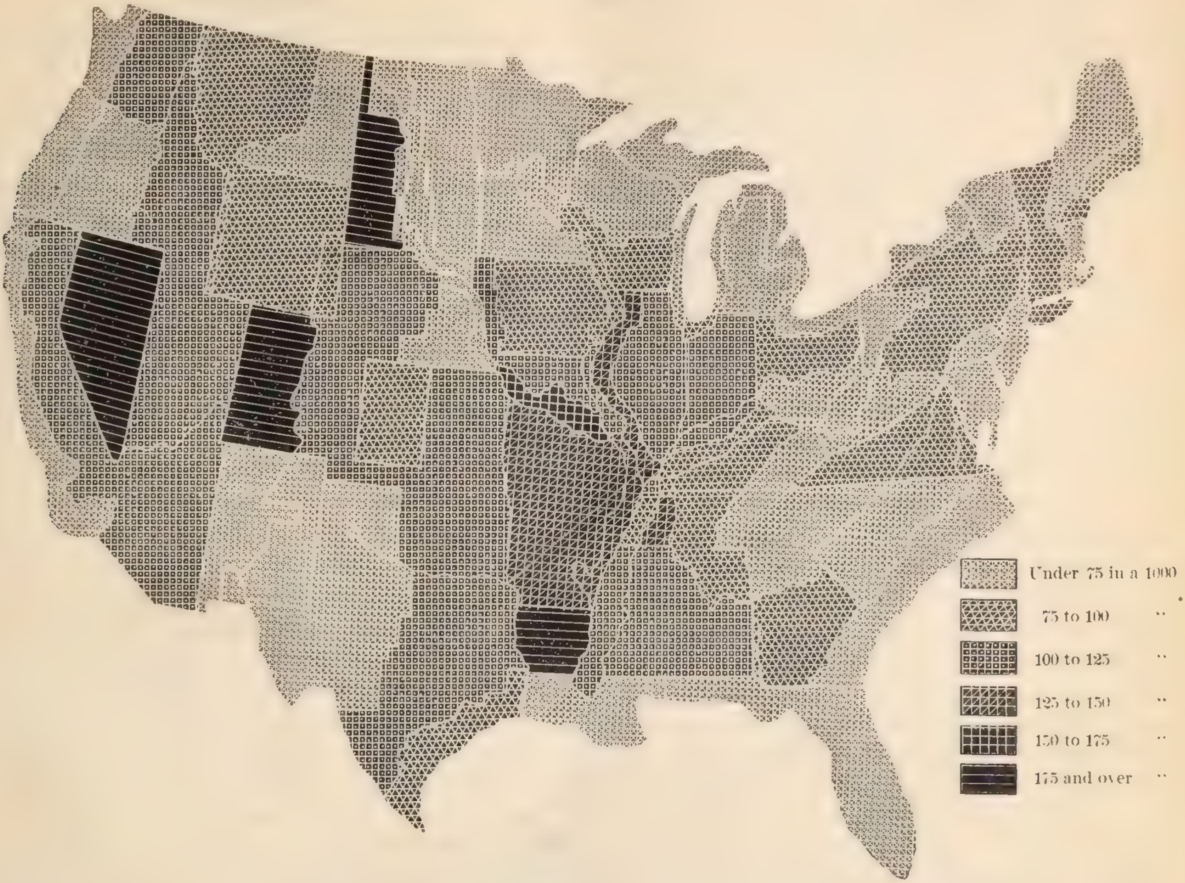
[*] Report on "Mortality and Vital Statistics of the United States" as returned at the tenth census, 2 vols., 4to, Washington, 1885–1886.



Map of the United States, showing the distribution of deaths from pneumonia as compared with total deaths from known causes. Census of 1880.

only object in calling your attention to the subject is to indicate the direction in which we may hope for good work hereafter, which indication is the chief, if not the only, valuable result of the work already done. In the brief comments which I have made upon these maps you will have noticed the stress which I have laid upon race peculiarities. These race problems are simply problems of heredity taken in mass, and there is no need to urge upon an assemblage of medical practitioners the importance of considering family peculiarities in diagnosis, prognosis, and therapeutics. That the questions involved are difficult and complicated is true, but we are already possessed of more knowledge with regard to them than is commonly supposed.

In a lecture on "Life," delivered a few months ago, Professor Brooks, of the Johns Hopkins University, illustrated this as follows: "If I am placed, with my eyes bandaged, before a stone lying free on the surface and am told to kick it, and if I know at the same time the size, shape, and weight of the stone and the character of the surface, I can form a pretty accurate idea as to what the result upon the stone will be. While if the object to be kicked is a dog, and I am given precisely the same data, I can not tell what will be the effect. But, if I can see the dog, I can, in many cases, predict pretty accurately. If he is a bulldog, he will do one thing; if he is a Gordon setter, he will do another." And, in like manner, the old family doctor knows that when a particular disease appears in his neighborhood he may expect to see it produce in one family convulsions, in another collapse, and in a third little or no danger or inconvenience. This kind of knowledge is, however, at present mainly confined to individuals; it has not become a part of the world's knowledge; it is not defined; in other words, it is not scientific. To make it so is the work of the future, and in this work I hope that we shall be able to help you.

I have spoken to little purpose if I have failed to show you that there is a great deal of human nature in American physicians, and that it is a kind of human nature with which you are tolerably familiar. It should be so, for we are of the same race—a race which, perhaps, as Emerson says, "sets a higher value on wealth, victory, and material superiority than other men, has less tranquillity, is less easily contented." Our ancestors were restless, fighters, freebooters, and from these ancestors we have the common inheritance of energy; of what *we* call "firmness," and our opponents unreasonable, pig-headed stubbornness; of liking to manage our own affairs, and, at the same time, to exercise a little judicious supervision over those of our neighbors; of hatred of humbug and lying; and, in spite of our discontent, of a firm belief that our wives and children, habits, houses, modes of business, and of treating disease are, on the whole, better than those of any other people under the sun. Privately, and between ourselves, we grumble and declare that the country and profession are going to the dogs—nay, we must do so, or we should not be of true English blood; but there is no need for me to tell you that these are only "growing pains," and not symptoms of progressive ataxy.

While we must consider the difficulties in the way of the improvement of the science and art of medicine, difficulties due to ignorance, to indolence, to conflict of interests, and to the eternal fitness of things, the existence of such difficulties is not a matter to be bemoaned and lamented over. These obstacles are the spice of life, the incentives to action, the source of some of the greatest pleasures which it is given to man to experience. The child, spending a happy hour with its new puzzle, is a type of the scientific investigator. The naturalist who objected to the statement that this was a miserable world which it was well to be soon done with, on the ground that there were still many species of rhizopods which he had not examined and classified, is another type. On the ethical and sociological side, the matter is summed up in Ruskin's aphorism, that "Fools were made that wise men may take care of them."

It is surely not without cause that there has been given to us this restless spirit of inquisitiveness, this desire to compass the heavens and the earth, this raging, infinite thirst for knowledge; it is the outcome of brain training and natural selection for thousands and tens of thousands of years. We are in a period of the world's history characterized by material prosperity, by increase of populations, by tendencies to uniformity, to the making of individuals of small account. According to the Swiss philosopher, Alphonse de Candolle, this is to last a thousand years or so, after which the pendulum will swing the other way, and there will follow a long period of diminution and separation of peoples, and of decadence. Against that decay of nations we know of but one remedy, and that is increase of knowledge and of wisdom. And this increase must be in *our* knowledge, in the world's wisdom, and not merely in that of John, or Fritz, or Claude. As each man has special opportunities and duties, if he can only recognize them, so it is with guilds, with professions, and with nations.

I have tried to indicate to you some of these opportunities which are presenting themselves to my colleagues, your brothers, in the lands beyond the sea, and I hope that I shall not be considered rash or vainglorious in saying that I believe they will so use those opportunities as to return compound interest for what they have received from the storehouse of our common inheritance. Force changes form and place, the stored energy of the soil of our plains and valleys has been coming here in the form of meat and grain, has appeared in muscle and brain, and in a hundred other shapes, but none has been destroyed; our loss has been your gain, and in our turn we have received full and fair exchange.

It is our part now to remember that there are not two springs in the year, there are not two periods of youth abounding in energy and desire, or of manhood's strength and self-poise, in the life of any man or of any nation, and for us, as for those who have been before us, the Kanuri proverb holds true, "*Kabu datsia, kargum bago*"—The days being finished, there is no more medicine.

Pasteur's Work.—Professor Virchow is reported to have said, in a recent lecture at Berlin, that Pasteur had done the world a great service if he had succeeded only in allaying the fear consequent upon the bite of a mad dog.

Original Communications.

IMPRESSIONS OF GERMAN AND ENGLISH GYNÆCOLOGY FROM THE STANDPOINT OF A WOMAN'S HOSPITAL ALUMNUS.*

By J. DUNCAN EMMET, M. D.

Mr. Chairman and Fellow-alumni of the Woman's Hospital: As its title suggests, my paper is not a comparative analysis of gynæcology in Europe and as we have it among us, nor is it a descriptive treatise of this science and art as they exist in Germany and England. It has no such ambitious aim. I simply wish to bring before you, in a more or less connected form, impressions which I received with regard to the knowledge and practice of gynæcology in those two countries, and only in so much as these impressions were received by one permeated with the wisdom of the teachings of the Woman's Hospital do they lay claim to your interest.

In Germany—and under that designation I would include, for convenience's sake, the Austrian Empire as well—Schroeder holds the central position as an all-round gynæcologist. In plastic surgery it is Schroeder's methods that are most extensively followed, and his writings are, perhaps, most widely known. Therefore I shall take Schroeder's methods as a typical example of the condition of gynæcological treatment and plastic work in Germany, and this is just, because he stands pre-eminently an exponent in the mind of Germany itself.

I saw Schroeder operate some seven or eight times. Three of these were operations upon the perinæum and anterior vaginal wall; the others were abdominal sections. He impresses one well as an operator. He is deliberate, though not tedious. He is most careful and dexterous. His invariable use of the knife, however, for denudation makes him appear at times awkward to any one to whom the advantages of scissors for this sort of work are known.

His operation for laceration of the posterior wall of the vagina, or, as he calls it, "perinæum," is that known as the "butterfly." It consists in a denudation extending from the crest of the rectocele across the vagina and to a point about half way up the vulvar opening on each side. Therefore, the vagina, for the posterior half of its circumference, and from the skin surface at the vulva to the crest of the rectocele, is all denuded, and these parts, then, when not on the stretch, resemble the wings and head of the insect from which it takes its name. Schroeder enters his needle at the middle of the crest of the rectocele, and unites the two sides of the denuded surface by means of a continuous whip-stitch of gut, passing down the middle of the vagina in a straight line, and uniting by two or three layers of continuous sutures superjacent planes of denuded tissue. These planes are arbitrary, of course, in a laceration of the posterior wall simply, and, as it is very difficult to explain this placing of the sutures, I will defer a more exact description until I speak of his operation as applied to a laceration through the sphincter, when I think I can make it perfectly intelligible.

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* Read before the Alumni Association of the Woman's Hospital at its second meeting.

Silver wire Schroeder neither uses nor appreciates; but, as I met but one man in Europe who had taken the trouble to learn how to twist and secure the ends from sticking up in all directions, his contempt for this, as he called it, "American method," did not surprise me.

I saw Schroeder operate also upon a laceration through the sphincter ani. His denudation was that already described. Then the edges of the rectum were united in the middle line from above downward by means of a catgut whip-stitch (that just took in the edges) until the anus was reached. With the same suture he then passed into the muscular tissue, uniting its edges similarly, but from below upward; upon reaching the uppermost point of denudation in the vagina, the same suture brought together, passing downward, the two mucous edges, and the vaginal laceration was closed. The remaining tear in the perinæum was closed with separate sutures. He used no deep sutures, and this principle of layers of fine suturing, instead of single deep stitches, he applies to every kind of operation when possible.

The above-described operation looked remarkably well, and the parts were brought together in the neatest apposition, and without possibility of strain upon any part. From all this but one result evidently could be expected—primary union; and, indeed, but two objections to it could be found by the most carping critic. First, that his method permitted no adequate attempt to restore the vagina to its normal size and shape and to give efficient support to the rectum, though quite a dam was thoughtfully built up at the vulvar orifice for the support of the uterus; and, secondly, and more important (considering the main object to be attained), the perineal denudation just about reached, without touching, the torn and expanded fibers of the sphincter, so that the patient will carry around with her, in all probability for the rest of her life, a slit anus, unless by good chance she comes to America and has a new sphincter given her. A cystocele is remedied by bringing together the edges of an elliptical denudation.

On the cervix a German discovers and heals ulcerations, and treats with local applications catarrh of the endometrium. When the catarrh won't cease, and when the ulcerations won't heal until epithelioma has supervened, the cervix is removed.

In the European mind there seem to exist, practically speaking, four organs, united under the generic name of uterus and broad ligaments. These are the perimetrium, the parametrium, the metrium, and the endometrium. Therefore the inflammations peculiar to these parts must all have their peculiar and separate remedies. The perimetritis has its external and intra-vaginal applications, the parametritis its iodine, its tampons, and its water-injections, the metritis its external and internal counter-irritants, but the endometrium, when diseased, being easiest of access, is most fortunate of all, for it has its nitrous acid, its strong iodine, its sound, its sharp curette, its nitrate-of-silver solution, and even the actual cautery, and all this is done by means of the cylindrical or the bivalve speculum. Indeed, I met but one man (the one who knew the manner of adjusting silver sutures—Dr. Breisky, of Prague) who used Sims's speculum or knew how to place a patient properly in the Sims position. Dr. Breisky's clinical advantages at present are comparatively small, owing to the political jealousy existing between the Czechs and Germans in Bohemia, which has necessitated a great subdivision of all positions in public institutions, but he keeps abreast with everything occurring in the medical world in this country, and, although he has never been here, he asked of all the surgeons now at the Woman's Hospital, knew them all by name, showed himself conversant with the published work of each of them, and wished to know particularly everything new and original that had lately emanated from that source. Without wishing to be harsh, the truth compels me to say that he is the only man of note whom I met who did not appear exalted with a becomingly patriotic sense of the brilliancy and entire superiority of German gynæcological ideas and a complete indifference to everything American.

But, allowing due weight to this national characteristic, self-complacency, and slowness in grasping ideas from foreign sources—and these are great—we still have ourselves to thank for the small esteem in which we are held in Germany.

Our medical students and graduates flock there to *really* learn, as they say, gynæcology, and in many instances, fresh from medical schools, display an imaginative ignorance in describing American methods and ideas that fills the credulous German mind with wondering pity. Again, our medical journals are so filled with German quotations and reports from Germany—contain so many metaphorical hand-wavings and nods for the master's recognition abroad—that we only deserve the kind of recognition that we ask for and receive. Our ridiculous self-depreciation in this direction was most strongly borne in upon me by a remark of a distinguished German surgeon who told me that he, in common with some of his colleagues, had subscribed to a well-known obstetrical and gynæcological journal of this country for the purpose of knowing what was doing in America. It came, however, so filled with the work of Germans, and contained so little which was American, that he thought that he would have to give it up. He asked if I knew any American journal which did report American gynæcological work.

Before leaving a description of German gynæcological treatment and plastic work, I wish to direct attention to two facts, the significance of which is great and apparent. The first rests upon the authority of several well-known German obstetricians and my own, of course somewhat limited, observations—and it is this, that there does not exist a single institution in Germany or Austria exclusively for gynæcological patients, such wards being but adjuncts to lying-in hospitals; gynæcology standing thus as the Cinderella of the obstetrical household. The second fact bears a relation, with which you are all familiar, to Emmet's operation, which is seldom performed in Germany. Recent death statistics in Vienna state that of *all* women past the age of twenty-five years who die yearly in that city, of *all* causes, 4½ per cent. die of cancer of the uterus. It will not be denied by any one, I think, that epithelioma of the cervix is extremely in excess of all cases of cancer occurring in all other parts of the uterus, whatever their character.

We all know that there are some who still maintain that epithelioma of the cervix may occur in the virgin cervix which has suffered no tear. But even the adherents of this doctrine can produce but isolated instances of this doubtful class of cases—enough, they maintain, to disprove the absolute dependence of this disease upon laceration of the cervix, but certainly not enough to influence statistics. Therefore two inferences must be drawn from the statistics mentioned —first, that the vast majority of these women in Vienna die of epithelioma of the cervix, and, secondly, that practically all these cases are those of parous women.

There is another branch of gynæcology, an offspring, however, of general surgery, and to which modern gynæcology has been the nourisher, the sustainer, the developing agent only. And in general terms I will here say that, the nearer the boundary-line of general surgery is approached, the more do the Germans find themselves at home. Therefore their success in all kinds of abdominal work is unequivocal, and the highest meed of praise is due them for their conscientious efforts at development and the remarkable additions they have made to our knowledge of this class of cases.

But yet it is not to the Germans as gynæcologists proper that this praise is due, for that science has not yet arrived at the dignity of a specialty to which its professors devote all their talents and their attention as with us, and lately in England. To understand rightly the position of that branch of surgery in Germany, we must divide the whole field of gynæcology between obstetricians and general surgeons. Gynæcological treatment and plastic work are held by obstetricians; abdominal work is divided between obstetricians and general surgeons. For example, while I was in Vienna, Billroth removed in his clinic an ovarian cyst, and the next day I saw him excise a portion of the tibia in a boy for necrosis. Carl Braun will attend a night case of confinement in his ward, perhaps (if it is abnormally interesting) will remove a fibroid in another ward next morning, and operate upon a rectocele or cystocele before his clinic in the afternoon.

The most original and interesting phase of laparotomy in Germany is, I think, connected with Schroeder's intraperitoneal treatment of the stump in myomata, and of deep-seated subserous fibroids, an interesting description of which is given in a monograph by Hofmeier, dated 1884.

I had the good fortune to see Professor Schroeder do several of the former operations. The first thing that impressed me on entering his operating-room was the extreme cleanliness. The room is tiled for five to six feet from the floor. On the top of this tiling is a slight projecting rim running round the whole room, along which, in different places, being in search of truth, I took the opportunity, unobserved, to pass my finger, especially in two or three angles. The result spoke well for the discipline prevailing in the cleaning department of his hospital.

After opening the abdominal cavity in the method with which we are all familiar, Schroeder raised the fibroid completely outside, and wound very tightly around its pedicle, as low down as possible, a moderate-sized rubber ligature. Then the mass was amputated as high as the length of the pedicle permitted above the ligature, and in such a manner that the length of the stump was decreased from without inward. This wedge-shaped excavation was then carefully searched for blood-vessels, whose mouths were securely closed with separate ligatures. When all visible vessels had been secured, the elastic ligature was very gradually loosened and each bleeding point then appearing on the stump separately tied. When convinced in this manner that all open vessels had been secured, he began to unite the opposite sides of the excavated stump with layers of fine silk sutures, beginning first at the bottom of the excavation; when the serous covering was reached, this was drawn over the now wedge-shaped stump and its edges were united.

When this had been accomplished the ligature was removed, a final inspection made for oozing, and the abdomen sponged and closed with silk.

Professor Schroeder professes never to have had hæmorrhage from the stump in uncomplicated cases from the use of this method, and he believes that, by leaving no granulating surface either inside or out of the abdomen, he minimizes the danger of septic poisoning. In all his operations he uses strict antiseptic precautions.

In cases where the whole or a part of the uterus is involved in the amputation, his method of treating the stump is the same. When the uterine cavity is cut through, he makes an application of a ten-per-cent. solution of carbolic acid to the open canal above his constricting ligature at once.

In the enucleation of fibroids growing in the subserous connective tissue of the pelvis he secures all blood-vessels as he proceeds with the enucleation, and then closes up with layers of fine sutures the bed of the removed tumor, by bringing its opposite sides together. Then the abdomen is closed without, of course, a drainage-tube.

Schroeder maintains that no pedicle is too wide or too rich in blood-vessels to be treated by the intra-peritoneal method.

In this clinic the patients are carried to and from the operating-room, but I saw at the clinic of Professor Winckel, in Munich, a contrivance to obviate all direct movement of the patient, which he believes is prejudicial after an operation. His clinic is well worth a visit to any one already grounded in gynæcology, for, although his methods are German, he himself seems a very clever and able man, and has more of the American wide-awake, "mean-business" air about him than any of his compatriots whom I happened to meet.

He performs a laparotomy on the bed which the patient is to occupy, it being protected by a raised board and rubber covering. He uses silk-worm gut for closing the abdominal wound, which he does with separate sutures passing through the whole thickness of the abdomen. He is most enthusiastic about this kind of suture, for its cleanliness, its strength, and its non-irritating properties. I certainly saw some perfect results with its use both then and afterward in London.

When he has finished the operation the patient is raised a foot or two in a perfectly horizontal position by means of a series of large double clamps, resembling, though much larger, those used by ice-men for carrying ice from their carts.

These cross underneath the head and body at short intervals, and are themselves suspended from cords, which, passing over pulleys, are attached to a horizontal bar resting upon two upright wooden posts about eight feet high. The whole apparatus of cords and pulleys is worked in unison by a single crank, and the machine can easily be rolled in any direction. While the patient is suspended directly over her bed, this latter is made ready to receive her, the assistant surgeons at the same time applying her dressings. The patient is then gently lowered into her bed without having experienced any strain, and in a remarkably short space of time.

I do not think I should be doing justice even to the general way in which I have treated the subject of laparotomy in Germany were I to neglect to say a few words on the subject of Listerism, which indeed the Germans themselves consider, and from one point of view justly I think, as the key-stone of their success.

Listerism is, therefore, " all the rage," though modified there as everywhere else into an endless variety of forms. What it has, however, done, whether directly or indirectly, for the Germans, is well shown in a monograph by an able assistant of Professor Spaeth, in Vienna, Dr. Ludwig Piskatschek. At that time assistant in the clinics of both Professor Albert and Professor Dumreich, he compiled statistics of the comparative mortality in their clinics from amputations, exarticulations, and resections, between the years 1873 and 1883. And, although the subjects here taken are not gynæcological, the results shown from the introduction of Listerism are as applicable, and really did take place to an equal degree, in all branches of surgery.

In the first half of the decade mentioned above, pre-Listerism existed; in the second half, antisepsis alone prevailed. Thus placing these two periods side by side, Dr. Piskatschek shows that, after amputations in the pre-Listeristic period, 55 per cent. of all patients died as compared with 15·9 per cent. in the next five years of antisepsis. After exarticulation, 50 per cent. died, compared with 33·3 per cent.; after resections, 25 per cent., compared with 3·5 per cent.

So the Germans believe in it and practice it scrupulously, and with great cleanliness, which latter may be the gist of the matter. Indeed, I heard Professor Lister himself say that one operator in Germany was so conscientious a believer that he and his assistant surgeons always scrubbed their heads with carbolic-acid solution and a nail-brush before undertaking any capital operation.

(*To be concluded.*)

The Chicago Medical Society.—At the next meeting, to be held on Monday the 16th instant, Dr. J. B. Hamilton will review the operations for the radical cure of inguinal hernia, and Dr. W. T. Belfield will report a case of supra-pubic cystotomy and corrosive sublimate intoxication.

THE METRE-LENS:

ITS ENGLISH NAME AND EQUIVALENT.

By SWAN M. BURNETT, M.D.,
WASHINGTON,

In the number of this Journal for July 24th there is an article by Dr. E. G. Loring on " Dioptric, Dioptre, Dioptrie, or Dioptry?" in which two points in physiological optics, concerning which there seem as yet to be differences of opinion, are discussed; and, as some utterances of mine are made the basis of his observations, I beg leave to say something in reply, not only in defense of my own position, but, as I believe, in assistance to a proper settlement of the questions at issue.

The first point is in reference to the English name of the metre-lens, or *dioptrie*, as it is called in French. In my review of Dr. Loring's most admirable text-book of "Ophthalmoscopy," in the last number of the " Archives of Ophthalmology," I took him to task for sanctioning the use of the word " dioptric " as applied to the metre-lens. Dr. Loring's " retort courteous " is that I was myself one of the first to use the word. I am sorry to say that is true. I remember it among my sins of commission in the past; and if I am responsible, in any degree, as I am afraid I am, for the introduction of that word into English nomenclature, I am now making the only reparation possible, in trying to get it out.

I happened to be in Paris at the time of the adoption of the metric system into ophthalmology, and Dr. Landolt asked me to translate his paper on the subject for some English journal. This I readily agreed to do, and the translation appeared in the " Royal London Ophthalmic Hospital Reports," vol. viii, part iii, appearing as an appendix, the editor kindly holding the number back for several days in order that it might be inserted, and this was, I believe, the first important contribution on that subject that was printed in the English language.

As to the English equivalent of the word " dioptrie," both Dr. Landolt and I were long in doubt, but finally dedecided upon " dioptric," principally, I think, because I had heard it used by Dr. Snellen (who, I believe, is a good English scholar) during my visit to Utrecht, and from whom I first learned of the adoption of the metric system by the Congress at Heidelberg.

I was, however, never satisfied with the word, and, when I undertook the translation of Dr. Landolt's " Examination of the Eyes," I consulted with several scholars and ophthalmologists in this country, with the result that the word *dioptry*—pl. *dioptries*—was used in that work and has been by me ever since. Our purpose was simply to anglicize the French word by changing *ie* into *y*, as is so often done. Thus we have (*F.*) *ophthalmoscopie*, (*E.*) *ophthalmoscopy*, and so on for almost every term used in ophthalmology whose termination is in *ie*. This we thought at least to be safe, for it was sustained by uniformity and precedent, which could not be said of any of the other terms suggested.

As to *dioptre*, it is neither " fish, flesh, fowl, nor good red herring." It is not French, for the French is *dioptrie*; it certainly is not German or Italian, and no proper English word (at least according to our American standards) ends in *re*.

As to substantives ending in the usual adjective terminal *ic*, there is no warrant for them in good usage; and as to the one which Dr. Loring has singled out in support of his position—the singular noun "optic"—the illustration is singularly unfortunate, for, while Pope may say:

"The difference is as great between
The *optics* seeing and the objects seen,"

most of us will only remember that classical street phrase—

"The bully boy with a crystal optic."

Moreover, in this connection it must be remembered that my use of the word *dioptric* was eleven years ago, and, in a progressive science like ophthalmology, a present consistency with past opinions or expressions should not be insisted on. That man is exceedingly fortunate who does not find some of the misconceptions and mistakes of his professional youth awkwardly confronting him in his more mature years.

And now as to the second point. Dr. Loring can not understand why I consider "it unaccountable that he should accept 1 D as equal to thirty-six inches focus," and maintains that he stated expressly in the text of his book that, "as the French metre is equal to *thirty-seven* inches, 1 D = $\frac{1}{37}$." My objection to *his* statement is, that it is neither clear nor correct. If he meant *French* inches, it is not clear, for it is not presumable that the author of a book written in the English language for English people, who have a standard inch of their own, should accept the inch of another nation as a standard without so stating it expressly and whenever the word inch is used.[*] We have accepted the metre as a standard of measure; but I can not see that we are for that reason compelled to accept the French inch. If he meant English inches, he is, of course, incorrect, as he will himself acknowledge.

In connection with this subject he quotes several paragraphs from my translation of Landolt's book in apparent support of his proposition. It may be stated in reference to that book that I was not the editor, but simply the translator, and did not and do not hold myself responsible for any of the opinions expressed therein. But I think a reference to the work will show that whenever the word inch is used there can be no mistake as to whether it is French or English; at least we aimed at that amount of clearness.

What Dr. Loring says in regard to a variation of the focus with the varying index of refraction is perfectly true, and his formulæ are in every particular correct; but, strange as it may appear, they "have nothing to do with the case."

The metric system was devised and adopted for the express purpose of getting rid of the difficulties, perplexities, and complications which he now brings forward again for discussion.

The standard metre-lens is one having a focus of one metre, and this is entirely independent of its radius of curvature and index of refraction. The acceptance of a certain refractive power as expressed by the focal distance of the lens, thus making it the same and uniform among all peoples, was the chief claim of the system to existence, and the only difficulty that could be encountered in the adoption of the system by any nation was in ascertaining how many of its inches constituted a metre. We have no longer to consider radius of curvature and index of refraction. Those are things that must be attended to by the optician. If we order a lens 1 D it must have a focal distance of one metre whether its radius of curvature be 20 or 40 inches, or its index of refraction 1·2 or 1·9. The sole question, therefore, we have to determine in this country is the equivalent of this lens in the measure that is accepted as a standard among us. This measure, I think, no one will deny to be the English inch, 39·5 of which make one metre. The fact that we may employ a lens that is ground to the French inch radius of curvature is of minor importance; in fact, of no consequence whatever, since its value is only reckoned by its focal distance; if that is one metre, it is 1 D; if one half a metre, it is 2 D; if two metres, it is 0·5 D. These values, however, can be expressed, in reciprocals, in any other measure we may choose—feet, inches, lines, cubits, or what not, but the absolute value of the metre-lens remains forever fixed, wherever ground and whatever the index of refraction of the glass of which it is made, and all the confusion that has arisen in regard to the conversion of the one system into the other has been due to the fact that, at the beginning, we attempted to make it easy for the opticians to use the old stock of lenses they had on hand, and which were numbered according to their radius of curvature in inches. That reason should have passed away long ago, and, if the metre-lens is to give us the simplicity and uniformity we have the right to demand of it, it is to be obtained only by ignoring radius of curvature and refractive index, and holding in mind only the focal distance.

This does not, however, prevent us from giving, as mentioned above, the reciprocals of these foci in inches; indeed, it is often of great advantage to do so, and Dr. Loring has done it to much profit in his text-book in the matter of clearness in his treatment of the questions of the determination of the refraction by means of the ophthalmoscope; and, until the metric system of notation becomes thoroughly established among us, it will often be necessary to express metre-lens values in inch reciprocals.

But what inch shall we use? Shall we import one which is even less familiar to us than the metre, or shall we use the one with which we have always been accustomed to work and whose exact value is known of all men? The metre-lens has a focus of 39·5 English inches. If a lens has a longer or a shorter focus, it is not 1 D. No great error, however, can come from considering 1 D = 40 English inches, and its division into parts is scarcely more difficult than with 36 as a standard.

Moreover, the metric system is used to denote the refracting power of the eye as expressed in its near- and far-points. These distances are usually reckoned in metric or inch measure. Would Dr. Loring have this done in French inches, and would he so teach his pupils, not one in ten of whom knows a French inch when he sees it?

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[*] Dr. Loring thinks I am mistaken when I say that "most of the lenses used in this country are ground to the English inch," and says Mr. Hunter and Mr. Meyrowitz use glasses ground to the French inch. Nevertheless, I have been informed by several of our extensive *manufacturing* opticians that the English inch is the one used by them.

We could not forbear to express our regret that Dr. Loring, whose appendix on optics to his text-book is a marvel of simplicity and clearness, should have added to the confusion which already exists on this point. If he had accepted forty inches as the reciprocal of one metre, I believe the question would have been settled finally in this country; and, in spite of all he has said, it still remains to me "unaccountable" that he, in the face of incontrovertible facts, should not have done so.

1734 K Street, *July 26, 1886.*

THE TREATMENT OF SCALP-WOUNDS
AT THE
CHAMBERS STREET HOSPITAL.

By C. R. PARKE, M. D.,

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There are during the year a great number of scalp wounds treated at the Chambers Street Dispensary, the only official record of which is a register containing the nature of the wound and the first dressing, the subsequent treatment and results not being entered.

In order that others might profit by the experience we thus gained in the treatment of these wounds, we deemed it advisable to keep an account of the subsequent treatment and ensuing results. I do not know that there is anything original in our method of treatment, but, such as it is, we find it to produce better results than any plan previously tried. I have treated and have seen treated since my connection with the Chambers Street Hospital a large number of scalp wounds, and have seen various methods employed, and have noted the different results. At one time we used almost exclusively a solution of carbolic acid (1 to 40), at another a solution of the bichloride of mercury (1 to 1,000), and of late a solution of hydronaphthol (1 to 2,000), which was the solution used in the treatment of the cases that I am about to refer to.

Our present method of treating a scalp wound is as follows: Upon admission of the patient the wound and bloody hair are thoroughly cleansed with a douche of the hydronaphthol solution, next the hair is carefully cut with scissors for about one inch around the margins of the wound, after which it is cleanly shaved; the wound is now again cleansed with the hydronaphthol, all clots and foreign bodies being removed, and careful examination for fracture made. This not being found, we proceed to the dressing, which consists in inserting ten or twelve horse-hairs through the bottom of the wound, the opposing edges of the wound being carefully approximated and sewn together with catgut sutures, the horse-hair projecting about three fourths of an inch beyond the ends of the wound and thus acting as an excellent drain. The wound is now again washed with the hydronaphthol, and powdered iodoform lightly dusted over the line of the sutures, upon which are applied a few layers of iodoform gauze; over this is placed a large compress of absorbent gauze, extending several inches beyond the wound on every side, the whole being held in place by a bandage, the style of which depends upon the location of the injury. The patient is told to return in two days, provided no pain or unlooked-for symptoms arise, under which circumstances he is requested to return at once. Upon returning two days later, as a rule, we find primary union throughout the entire length of the wound, excepting at the ends where the drain protrudes. We have now converted the open scalp wound into a perfectly drained sinus. All but three or four of the horse-hairs are removed, the sinus is irrigated with the hydronaphthol solution, and the same style of dressing reapplied. In two or three days more the sinus has so narrowed down that the remaining horse-hairs can with safety be withdrawn, and complete healing can occur under the dressing then applied; the catgut sutures are absorbed and give rise to no trouble. The wound thus heals with little or no scar, as compared with the plan which allows the wound to granulate from the bottom, and furthermore offers the advantage of healing in a much shorter time. The virtues which I maintain for the hydronaphthol solution over those possessed by the carbolic-acid and bichloride solutions are that it is without odor and does not burn or discolor the hands as carbolic acid does, neither does it ruin one's instruments nor cause any danger from absorption, as is the case with the bichloride, while at the same time it is a perfect deodorizer, non-irritant, and, as I think, a disinfectant.

In order to give a little idea of the results we obtain under this method of treatment, I took at random 30 out of the 123 cases treated here in thirty days and carefully looked the patients up; five of them never returned after the first dressing was applied. Of twenty-five there was a full record until they were discharged cured. The longest period that any patient was under treatment was ten days, and the shortest three days, the average being six *plus.* The greatest number of dressings employed in any one case was six, and the smallest two, the average being three *plus.*

We maintain that a period of less than seven days, with but from three to four dressings, is a short time in which to cure and discharge patients having scalp wounds varying from one to four inches in length, and we also maintain that they heal under this method of treatment without accident either from cellulitis or the burrowing of pus, no accident of this kind having occurred in any of our cases so treated.

Of course, we have a number of cases in which the wound is so lacerated and contused, and those in which there is so much loss of tissue, that it would be folly to attempt primary union, but the great majority of our cases are treated after the manner I have described and with most satisfactory results.

Correspondence.

TELEGRAPHIC LETTER FROM BRIGHTON.

The Meeting of the British Medical Association.

Brighton, *August 12, 1886.*

The British Medical Association has been favored in its fifty-fourth annual meeting, now drawing to its conclusion here, by the prevalence of beautiful weather, the judicious and thoughtful arrangements made by the local executive committee, and a large attendance, including that of many foreign guests, among whom Americans are prominent. First among the entertainments was a reception given by the Mayor of Brighton on Tuesday, the opening day of the meeting. The address delivered by the president, Dr. Withers Moore, of Brighton, dealt largely with the "higher education" of women—or, rather, that form of their education which aims to put them into men's shoes—and in particular with the damage to their health and their fecundity caused by excessive brain work, both in its immediate bearing upon the women of the present day and in its prospective influence in bringing about a deterioration of the race. The competition of women with men was unwholesome; the forced action of their brain which was considered "progressive" incapacitated them in great measure both for the proper performance of their bodily functions and for the form of mental work which was peculiarly their own by nature. Dr. Moore was quite positive in the expression of these views, and backed them up by pointing to American experience as exemplified in the writings of Clarke, Emmet, and Loomis, and to the observations of Tuke, Crichton Browne, and others. At the conclusion of the address a vote of thanks to the president was moved by Dr. N. S. Davis, of Chicago.

On Wednesday your distinguished countryman, Dr. Billings, delivered the Address in Medicine. As I understand that you are to publish it, I will make no further remark than to say that it completely fulfilled the anticipations of the audience, and greater justice could not be done by it. The Address in Surgery was given by Professor Frederick Abell Humphry, surgeon to the Sussex County Hospital. Recent advances had been greater, he thought, in the domain of operative procedures than in that of the medical treatment of surgical diseases, the most notable achievements of the latter being the use of anæsthetics and that of antiseptics. With regard to antiseptics, he attributed their chief power for good to their preventing decomposition rather than to their preventing fermentation due to germs. As noteworthy examples of the predominance of scientific knowledge in controlling and directing advances in the treatment of disease, both medical and surgical, Mr. Humphry alluded to Hilton's essay on "Rest and Pain" and to Pasteur's experimental investigation of hydrophobia and the possible means of preventing it.

In the Section in Surgery, the president's address, by Mr. John Eric Erichsen, of London, related to the advances made in surgery since the introduction of anæsthetics. These, he said, included: 1. An extension of the scope of surgery, with improvements in its methods. 2. Increased precision in the performance of operations and greater certainty as to their results. 3. The promise of a wider application of scientific methods of research in the future. The address of the president of the Section in Obstetric Medicine, Dr. Alfred Meadows, of London, dealt largely with the alternatives of craniotomy and with the operation of removal of the uterine appendages. Dr. Meadows advocated the entire abolition of craniotomy, and recommended Porro's operation as preferable to the Cæsarean section, more especially as it effectually precluded the subsequent occurrence of impregnation. Removal of the uterine appendages he looked upon as undoubtedly a sound procedure in appropriate cases, but it was to be feared that its too frequent performance was among the results of the surgical tendencies of the present day, which were too apt to lead to the neglect of scientific therapeutics in gynæcology. In the Section in Psychology, the president, Dr. Thomas Smith Clouston, of Edinburgh, spoke in his address of the relation of bodily pain to mental suffering. After referring to Meynert's theory, he directed attention to the close connection between melancholia and neuralgia. Bodily pain preceded melancholia; and there was a state of mental analgesia succeeding an acute melancholic attack analogous to the state of anæsthesia that followed an attack of neuralgia. Mental and bodily pain could not co-exist in great intensity, but in hypochondriasis they co-existed in moderate degree.

The address by the president of the Section in Ophthalmology, Mr. Charles Oldham, of Brighton, while welcoming the members, reminded them that the last Brighton meeting of the association had been held in 1851, the year in which Helmholtz invented the ophthalmoscope. The speaker then enumerated the advances of the past year, alluding particularly to our improved knowledge of sympathetic ophthalmia and simple glaucoma, to the use of cocaine, to suppuration after operations for epiphora, to the use of antiseptic precautions in ophthalmic surgery, and to the extension of ophthalmological knowledge among non-specialists. Mr. G. F. Hodgson, of Brighton, the president of the Section in Otology, gave an address reviewing the progress of aural surgery during the present century, showing that, while virtually it had no existence before that time, it was now fully abreast of the other branches of the healing art. As a consequence, some knowledge of it should be diffused among general practitioners.

To-day (Thursday), the Address in Public Medicine was given by Dr. E. D. Mapother, of Dublin. Dr. Mapother spoke first of efforts to abate the smoke nuisance, particularly of the necessity of suppressing the escape of smoke from private chimneys, and advocated the gradual compulsory introduction of smoke-consuming grates, also Cooper's method of purifying gas by using limed coal. The decrease in the death-rate, he said, was chiefly attributable to sanitation, especially in the matter of the mortality of infants less than a year old from diarrhœal diseases. The speaker then made suggestions as to infant feeding from a preventive point of view, and as to the precautions to be taken to prevent the spread of scarlet fever by milk, the disease being communicable to cows by inoculation. The address before the Section in Medicine, by the president, Dr. W. H. Broadbent, called attention to the desirability of looking beyond the immediate results of treatment and the necessity of forethought in the employment of remedial measures. The president alluded to the habitual frequent suppression of gouty manifestations as leading to accumulation of nitrogenized waste-products with high arterial tension—results which were also produced by Bantingism, by rigid dietetic methods of treating diabetes in elderly persons of a gouty habit, by the relief of asthmatic paroxysms with solanaceous powders, and by attempts to cure sick headaches by means of low diet and purgatives.

The American delegation present, including Dr. Davis and others, made a statement before a crowded general meeting in regard to the affairs of the International Medical Congress. The delegates were received with enthusiasm, and their renewed invitation to the members of the association to visit Washington in 1887 was cordially accepted.

LETTER FROM LONDON.

The Meeting of the British Medical Association.—Death of Dr. Walter Moxon.

London, *July 31, 1886.*

The Annual Congress of the British Medical Association is to be held at Brighton on the 10th, 11th, 12th, and 13th of August, and the meeting promises to be a most successful and interesting one. Brighton is exceptionally well placed for a congress. It is within fifty miles of London and can be easily reached from other populous resorts on the southern coast.

Steamers from Glasgow, Dublin, or Cork will land passengers at Brighton for the Congress if there are enough of them to make it worth while; and, above all, the popular watering-place is temptingly within the reach of foreign doctors, many of whom have signified their intention of being present. Besides this, Brighton itself contains a strong contingent of medical practitioners, many of them of fair repute in their respective specialties, so that the association has been able to supply the Sections of Public Medicine, Ophthalmology, and Otology with presidents from among the local profession, while the president of the Congress, Dr. Withers Moore, is himself a Brighton physician. The event of the meeting will of course be Dr. Billings's Address in Medicine. Apart from the desire, which we may take it will be universal, to give due honor and greeting to a distinguished guest, many of the visitors to the Congress will be driven, by their memories of Dr. Billings's address to the International Congress in 1881, to seize the opportunity of again hearing so attractive and weighty a speaker. The other public addresses—viz., in Surgery and Public Medicine—will this year be comparatively insignificant. In the sections arrangements have been made for several interesting discussions. That on Peripheral Neuritis in the Section of Pathology will be rendered attractive by the presence of Professor Charcot, and in the same section the proposed discussion on the Ætiology and Pathology of Pneumonia promises fair to be well worth hearing. In the Section of Medicine, Sir Andrew Clark will introduce a debate on a subject to which he has devoted much attention—viz., Valvular Disease of the Heart without Serious Symptoms. Many of our most distinguished physicians, both from London and the provinces, have promised to take part in this discussion, as also in a debate in the same section on the Rare Symptoms of Gallstones. In the Section of Surgery Sir Henry Thompson has undertaken to open a discussion on Supra-pubic Lithotomy, and many papers are promised in connection with this department of visceral surgery. In fact, in all the sections there is a prospect of considerable activity, and the Brighton Congress will no doubt favorably compare with any of its predecessors in respect to its usefulness in advancing and assuring our knowledge of medicine in all its branches.

One well-known figure will be missed from the Congress, that of Dr. Moxon, of Guy's Hospital, whose sudden and premature death a fortnight ago has thrown a gloom on the profession in London. Dr. Moxon was a man of remarkable and fascinating personality, whose early death, taken in conjunction with the recent losses of Hilton Fagge and Mahomed, has been a most serious blow to the school of Guy's Hospital. Though brought up in the eminently practical traditions of that hospital, and engaged for the greater part of his career in dealing with the dry facts of anatomy—normal and pathological—Dr. Moxon was never able—perhaps was never willing—to conquer the innate bent of his mind toward the subtilties of metaphysics. He was one of our best and wittiest writers, but he leapt over the bounds which hem in those of more limited minds, and loved to deal with problems which defy accurate scientific analysis. On whatever question he spoke, one might be sure that Dr. Moxon would take a bold, original, and unexpected view. No one could forecast the operations of his intellect, and, therefore, though he did excellent work, and was to those who knew him a beloved and fascinating friend, he has left less impress on medical science than might have been expected from one of his undoubted genius. He leaves, however, a gap which it will be impossible to fill.

A New Medicinal Preparation.—Two Poles have been sentenced to six months' imprisonment for disinterring the bodies of two Jews, cutting off their hands and chopping them up for "medicinal purposes."

THE
NEW YORK MEDICAL JOURNAL,
A Weekly Review of Medicine.
Pubished by D. Appleton & Co.
Edited by Frank P. Foster, M. D.

NEW YORK, SATURDAY, AUGUST 14, 1886.

THE JEFFERSON MEDICAL COLLEGE.

The Jefferson Medical College, of Philadelphia, has lately been made the subject of unfavorable, not to say ungenerous, remarks by one or more of our contemporaries, and now a controversy concerning it has cropped out in the secular press, Dr. J. F. Baldwin having written a letter, headed "Advance (?) in Medicine," to the editor of the "Ohio State Journal," which was published in that paper on the 3d inst. Dr. Baldwin's letter appears to be in reply to a statement published by the dean of the college, Dr. Bartholow, the latter gentleman's communication having been called forth by certain criticisms previously made by Dr. Baldwin. We have not seen either Dr. Bartholow's letter or the publication that induced him to write it. We infer that the main point at issue is related to the course pursued by the State Board of Health of West Virginia toward the college. Whatever the occasion of the board's action may have been, it seems to have promptly receded from a position that it had taken adverse to the college. There is nothing necessarily discreditable to either party in such an occurrence, and it is very much to be regretted that it has been brought before the general public in the newspapers, for the public is not in a position to judge of the merits of the case. While Dr. Baldwin practically concedes that the facts, as regards the West Virginia matter, did not call for condemnation, he still maintains that what he supposed to be the facts warranted his criticisms. He also complains that the college is backward in the matter of enlarging its curriculum, and, in particular, that it does not demand attendance on three full courses of lectures as a prerequisite to graduation, and that it does not insist upon an entrance examination. As regards those points, allowing that the facts are as Dr. Baldwin has stated, the great majority even of our leading schools occupy precisely the same position, and it seems to us unfair to hold Jefferson up to the community as exceptional.

As to the comments in certain medical journals, it is hardly covering the ground to designate them as criticism. They border on downright abuse, and that fact, taken in connection with certain rumors that have been current for some time past (to the effect, for example, that the Jefferson faculty had crowded certain gentlemen out of the teaching corps because those gentlemen were loyal to the American Medical Association's code of ethics—an insinuation that is in the highest degree absurd), shows that there is some deeper-seated animus at work than is commonly the outcome of a college controversy. The true nature of that animus is more or less conjectural; on the surface, it looks like an attempt to build up the Medico-chirurgical College at the expense of Jefferson, but we should not be surprised if it turned out to be in the interest of certain individuals rather than in that of any educational institution. Whatever the true reason may be for this concerted attack on the Jefferson College, it is likely to be no more successful than it is creditable. The college stands too high, and it deserves its standing too well, for its fortunes to be appreciably affected by such a course. Its alumni are among the most honored members of our profession in every State of the Union and in every considerable city, and its faculty is and always has been among the most satisfactory in the country. The college can well afford to remain silent under the ridiculous and ill-natured charges brought against it.

THOMSEN'S DISEASE.

In our last issue we took occasion to compliment the neurologists on the advances made in their special branch during the present decade. The disease we purpose discussing now, while our knowledge of it is an evidence of the neurologists' progress and spirit of research, still offer sone of, alas! the many forcible illustrations of the wide field yet open for investigation and of the imperfection of our knowledge, in spite of the improved methods of research and the greater delicacy and accuracy of the instruments of the present day. Apart from its obscure nature and its rarity, the disease is interesting from the fact that one of its victims—Dr. Thomsen—was the first to bring it into prominence. Thomsen first described the affection in 1876, as he had observed it in himself and in several members of his family. Since that time it has been known as Thomsen's disease, although it has been pointed out that Sir Charles Bell, in 1836, mentioned the existence of a disease presenting almost the same clinical features, but did not give it a name.

In a recent and able monograph of 128 pages, by Professor Erb, is to be found everything previously known about the disease, together with the clinical notes of three cases that have come under the author's own observation. As has been stated in a clear and exhaustive review (in the "Journal of Nervous and Mental Disease" for June, 1886), Professor Erb's *brochure* is not merely a compilation of cases before reported, but an entirely independent study of the disease, adding materially to our knowledge of its pathology and symptomatology. Erb has been able to collect only twenty-three cases in literature which he considers should be classed as examples of Thomsen's disease; eleven others he thinks doubtful, and of Hamilton's five cases he makes no mention. The characteristic features of the disease, according to Erb, are as follows: After the patient has been at rest for some time, and then attempts to use his muscles, he finds that they respond but slowly and with difficulty to the impulse of the will. In consequence of this there is a rigidity, which passes off only on continued muscular effort. All the voluntary muscles seem to be affected alike. They are enormously developed, but their power is not in proportion to their size. In the passive state they seem normal; during contraction they are hard and firm. The mechanical and electrical excitability of the motor nerves appears to undergo little or no change, with the exception that a sudden increase of the strength of the faradaic current may cause prolonged contraction. The excitability of the muscles, however, mechanical and electrical, undergoes considerable change. Simple tapping with the fingers on the muscles is sufficient to call forth tonic contractions which may last from five to thirty seconds. The faradaic excitability is increased, but the opening contractions, no matter how strong, are never lasting. The galvanic excitability is increased quantitatively, and qualitatively the changes are not unlike those observed in the "reaction of degeneration"; the contractions are slow, tonic in character, and prolonged. Stabile currents produce rhythmical, wave-like contractions, which Erb considers quite characteristic, and he proposes the term *myotonic reaction* for the combined electrical phenomena.

As to its causation, all that can be said is that the disease occurs in young subjects, that it is hereditary, and that several members of the same family are likely to be affected. The pathology is wrapped in obscurity. Many regard the affection as merely functional; Erb, however, has found changes in the muscles. In addition to the enormous hypertrophy of the muscular fibers, he has found a considerable increase in the number of nuclei in the sarcolemma and an increase of the interstitial connective tissue. Although, thus far, neither he nor any other observer has found any change in the central nervous system, he thinks it probable that future investigations may prove Thomsen's disease to be a tropho-neurosis.

MINOR PARAGRAPHS.

THE BRITISH MEDICAL ASSOCIATION.

We quite agree with our London correspondent that Dr. Billings's Address in Medicine was likely to prove the *pièce de résistance* at the Brighton meeting, and we take great pleasure in being able to give the full text of the address in this issue. Long as it is, we are confident that our readers will concede that it ought not to have been abbreviated, and that those of our contributors whose articles its insertion has compelled us to lay over will acknowledge that their contributions could not have been postponed for a better reason.

Besides the clearness and gracefulness of style that the whole profession has come to look forward to in anything that emanates from Dr. Billings, the matter which he laid before our British brethren on Wednesday was of a nature to be read with interest by Americans as well as foreigners for its direct bearing on some of the confused aspects of State medicine, of ætiology, and of educational problems. The address certainly deserves to rank with the most notable that have been made before the association.

A MEDICAL DIRECTORY OF THE UNITED STATES.

We are in receipt of a volume of 1,452 pages containing the names of nearly 80,000 persons who are practicing medicine within the United States and the Territories. They are arranged alphabetically by State, city, and post-office, each name being accompanied by all the information attainable as to place and time of graduation. A numeral after each name refers the reader to a list of colleges, in which is found, arranged by States, the college from which each individual was graduated. All "schools" are represented, each being designated by its proper initial, and, in cases where no list of diplomas could be obtained from the college issuing them, the graduates from such colleges are marked as unverified. A full list of medical institutions is given for each State, and there is an alphabetical index, having opposite each name the number of the page upon which the name occurs, which makes it easy to find and locate every individual whose name appears in the volume. There are, in addition to this, full lists of the medical colleges in the United States and Canada and of the medical journals published in the United States and also the medical rosters of the Army, Navy, and Marine-Hospital Service, and of the examining surgeons appointed by the Pension Bureau. The magnitude of such a work, the almost insurmountable difficulties met with in its preparation—which, however, from a careful examination of the work, we think the publishers have succeeded in overcoming in a most satisfactory manner—and withal the inestimable value of the volume to every one who ever has occasion to refer to a medical directory, entitle the publishers, Messrs. R. L. Polk & Co., of Detroit, to no small meed of praise. As a specimen of book-making, the directory compares very favorably with any work of its kind that is published.

ITEMS, ETC.

Army Intelligence.—*Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from August 1, 1886, to August 7, 1886:*

Bentley, Edwin, Major and Surgeon. Ordered from the Department of Texas to the Department of the East. S. O. 179, A. G. O., August 4, 1886.

Appel, D. M., Captain and Assistant Surgeon. Ordered from the Department of the East to the Department of Texas. S. O. 179, A. G. O., August 4, 1886.

Middleton, Passmore, Major and Surgeon. Granted leave of absence until September 10, 1886. S. O. 100, Division of the Atlantic, August 3, 1886.

White, R. H., Captain and Assistant Surgeon. Ordered from Angel Island, Cal., to San Diego Barracks, Cal., relieving Captain Leonard Y. Loring, assistant surgeon. S. O. 64, Department of California, July 28, 1886.

Retired.

Murray, Robert, Brigadier-General and Surgeon-General, U. S. A., August 6, 1886.

Appointments.

To be assistant surgeons with the rank of first lieutenant.

Harris, Henry S. T., January 5, 1886.
Wood, Leonard, January 5, 1886.
Banister, William B., January 26, 1886.
Mason, Charles F., May 5, 1886.

Promotions.

To be surgeons with the rank of major.

Bartholf, John H., Captain and Assistant Surgeon, January 4, 1886.

Kimball, James P., Captain and Assistant Surgeon, January 24, 1886. Mem. A. G. O., August 2, 1886.

Marine-Hospital Service.—*Official List of Changes of Stations and Duties of Medical Officers of the United States Marine-Hospital Service, for the two weeks ended August 7, 1886:*

Long, W. H., Surgeon. Granted leave of absence for fifteen days. July 30, 1886.

Sawtelle, H. W., Surgeon. To proceed to Portland, Oregon, and Port Townsend, Washington Territory, as inspector. July 29, 1886.

Devan, S. C., Passed Assistant Surgeon. Granted leave of absence for ten days. July 26, 1886.

Fattic, J. B., Assistant Surgeon. Granted leave of absence for twenty-nine days. July 26, 1886.

Hutton, W. H. H., Surgeon. To proceed to Key West, Fla., for temporary duty. August 7, 1886.

Bevan, A. D., Assistant Surgeon. Ordered to examination for promotion. August, 1886.

Williams, L. L., Assistant Surgeon. When relieved at Buffalo, N. Y., to proceed to Mobile, Ala., for temporary duty. August 2, 1886.

Society Meetings for the Coming Week:

Monday, *August 16th:* Hartford, Conn., City Medical Association; Chicago Medical Society.

Tuesday, *August 17th:* Medical Society of the County of Kings; Ogdensburg, N. Y., Medical Association.

Wednesday, *August 18th:* New Jersey Academy of Medicine (Newark).

Thursday, *August 19th:* New Bedford, Mass., Society for Medical Improvement (private).

Saturday, *August 21st:* Clinical Society of the New York Post-Graduate Medical School and Hospital.

Obituaries.

Frank Hastings Hamilton, M. D., LL. D.—Our readers will regret to learn of the death of this distinguished surgeon, which took place at his house in New York on Wednesday, the 11th inst., as the result of pulmonary disease of some two years' standing.

Dr. Hamilton was best known in the profession by his classical treatise on "Fractures and Dislocations," a work that has passed through several editions, been translated into more than one European language, and been accepted for many years past as the standard authority in that branch; to the general public he was probably best known from his connection with the management of the late President Garfield's case, in which he was one of the consultants. Besides his best-known book, he was the author of several other important works, including one on military surgery and a general text-book of surgery. As regards contributions to periodical literature, he was not a prolific writer, but what he wrote was always of substantial worth and presented in a clear and attractive style. Notable among his later papers were two that were published in this journal: "The Asiatic Cholera as it appeared at Suspension Bridge, Niagara County, N. Y., in July, 1854, and its Lessons; What we Know of the Cholera" ("N. Y. Med. Jour.," Nov. 15, 1884, p. 533), and an article entitled "Dislocation of the Head of the Radius downward (by Elongation)," being a commentary on certain views that had been expressed by the French translator of his book on "Fractures and Dislocations," Dr. Poinsot ("N. Y. Med. Jour.," Jan. 3, 1885, p. 8).

At the time of his death, Dr. Hamilton was in his seventy-third year, having been born in 1813, at Wilmington, Vt. He received his medical degree from the University of Pennsylvania in 1833, and began practice in Auburn, N. Y. In 1844 he moved to Buffalo, where, in conjunction with the late Dr. Flint and the late Dr. White, he was largely instrumental in building up the medical department of the University of Buffalo. In 1862 he came to New York, having been appointed a professor of surgery in Bellevue Hospital Medical College, a position which he resigned in 1875. During the War of the Rebellion he served in the medical department of the army, and rose to the rank of medical inspector. The deceased was a member of the American Medical Association, of the Medical Society of the State of New York (of which he was president in 1855), of the New York State Medical Association, of the New York Academy of Medicine, of the New York Pathological Society, of the New York County Medical Association, and of the Society of Medical Jurisprudence and State Medicine. At the time of his death he was one of the surgeons to Bellevue Hospital and a consulting surgeon on the staff of several institutions.

Dr. Hamilton was a man of sterling worth, and his loss is a heavy blow to the New York profession.

OBITUARY NOTES.

Samuel J. Allen (senior), M. D., of White River Junction, Vt., died on Sunday, August 8th. He was graduated from the Medical College at Castleton in 1842, and was a physician and surgeon of much local eminence. His death was due to acute nephritis.

Proceedings of Societies.

AMERICAN OPHTHALMOLOGICAL SOCIETY.

(*Concluded from page 163.*)

The First Eye Infirmary in the United States.—Dr. St. John presented a communication from Dr. Bolton, of Trinity College, to the effect that he had discovered that his grandfather, Dr. North, had founded in New London, Conn., in the spring of 1817, the first eye infirmary established in the United States.

The Effect of the Electric Light upon the Eye.—In a paper with this title, Dr. J. A. Andrews, of New York, considered the relative effects of illumination with gas, with kerosene, and with the incandescent electric light. The latter gave the maximum of light with the minimum of heat. So far, the only cases of injury to the eye from the electric light had resulted from exposure in close proximity to the intense light of the arc lamp. In most of those cases the existence of previous eye trouble had not been excluded. The effect in these cases could be best explained as occurring through the sympathetic nervous system rather than as a result of mechanical or chemical influences. No case of injury to the eye from the incandescent light had been reported, and, out of eleven hundred workers with the incandescent light, not one had complained. The incandescent light had advantages over other forms of artificial light, principally its steadiness and the fact that its use did not vitiate the atmosphere.

Dr. W. F. Mittendorf, of New York, said that the popular feeling had been that the electric light was injurious, but his experience proved the contrary. It was so perfect that it need not be brought very close to the eye, and the efforts of accommodation were less. On account of its steadiness, less work was thrown upon the iris than with a flickering light.

A Method of overcoming Diplopia when Prisms are not fully effective.—Dr. William S. Little, of Philadelphia, read the history of a case in which, in order to prevent looking under the glass and seeing double in the lower field, he had resorted to the following procedure: The sphero-cylinder correcting the myopia of the right eye had been ground opaque for one sixteenth of an inch above the horizontal plane, so as to obliterate sight in the lower field of vision in that eye. Then there had been attached to the lower portion of the frame the wire network used in protection glasses, the perforations in the gauze having been stopped by painting it. Vision was thus cut off below.

Two Epidemics of Molluscum Contagiosum were described in a paper by Dr. Mittendorf.

A Case of Melano-sarcoma of the Conjunctiva and Cornea was also described by the same gentleman.

The Use of Hot Water in some of the Corneal and Conjunctival Inflammations was the title of a paper by Dr. B. E. Fryer, of Kansas City. In this plan of treatment water was used at as high a temperature as could be borne. After a few hours, a temperature of 140° F. could be tolerated. The water should not be cooler than this, but as much hotter as the patient could endure. A method of using it was by fomentation with a napkin dipped into the hot water and (not wrung out) applied to the closed eyelids. This was continued for half an hour at a time and repeated every one, two, or three hours, day and night. It might also be applied by suspending a vessel above the patient and allowing the water to escape through a tube, thus keeping up a continuous action. In some cases the temperature might be raised almost to the boiling point. During the intervals between the applications, a cloth wrung out of the hot water was allowed to remain over the eyes. In some cases of purulent ophthalmia the hot water might be thrown into the conjunctival sac. In purulent conjunctivitis this application cut short the attack more quickly and safely than the use of ice-cold water. In gonorrhœal ophthalmia it quickly lessened the swelling and diminished the tendency to ulceration of the cornea. If ulceration had begun, it was less likely to progress and the amount of cicatricial tissue was lessened. In these cases the author occasionally used instillations of sublimate solution or finely powdered iodoform. In catarrhal and phlyctenular ophthalmia it was a good adjuvant. In acute and chronic keratitis it was useful. Its most marked effects were seen in cases of corneal ulcer. The small amount of opaque tissue left was astonishing. The pain and photophobia were also diminished.

Dr. Samuel Theobald, of Baltimore, had not used hot water in purulent troubles, but in interstitial and specific keratitis its use had been beneficial, and he thought it favored absorption of the opacity.

Asthenopia and the Changes in Refraction in Adolescent and Adult Eyes.—In a paper with this title, Dr. William F. Norris, of Philadelphia, remarked that it was regarded by some as unnecessary to correct slight errors of refraction, but he considered their correction as of great importance when they produced asthenopia. By removing the trouble, congestion and softening of the eye (important factors in the production of astigmatism and conical cornea) were removed and lengthening of its visual axis was prevented. A number of cases of diminishing hypermetropia and of hypermetropia passing into myopia were described. Diminishing hypermetropia and increasing myopia were simply different stages in a process essentially the same. They were both the result of softening of the eyeball and slow distension in the direction of the visual axis. Careful correction in these cases was one of the best means of preventing their further progress.

Dr. Gruening had been much interested in one group of cases. The patient on arising had pain in the eyes, with photophobia, passing off in an hour or two. He was not able to fix on any object for any length of time. There was also lacrymation. When the speaker found such symptoms, he almost always found evidence of nasal disease. He had treated these patients by removing the nasal trouble, and, in a series of 200 cases, 150 had been benefited, while the remaining 50 had passed from observation.

The subject was further discussed by Dr. Theobald, Dr. Harlan, Dr. Risley, and Dr. Randall.

Thursday's Proceedings.

The Amblyopia of Squinting Eyes; is it a Determining Cause or a Consequence of the Squint?—This was the title of a paper by Dr. S. Theobald, of Baltimore, who criticised the view that the amblyopia exhibited by squinting eyes was a congenital defect, and argued in favor of the older view that the amblyopia was secondary to the squint, and due to the mental suppression of the visual image formed in the squinting eye. Schweigger and Alfred von Graefe, who both accepted the theory of acquired retinal identity, believed that squint was often due to its non establishment after birth. If this was the case, as there woud be from the first no stimulus to binocular fixation, the squint ought to develop in early infancy, whereas it was rarely met with then, but usually made its appearance about the fourth or fifth year. Both the authors mentioned also laid stress upon the fact that some squinting eyes retained good vision for years, while others which had squinted but a short time were highly amblyopic, and maintained that this contradicted the theory that the amblyopia was produced by the squint. These observations, however, did not conflict with the suppression theory, for, as the amblyopia doubtless developed during the forming stage of the squint, it was reasonable to suppose that in some cases it would have reached a high grade by the time the squint was fully established, while, on the other hand, a marked difference in the refraction of the two eyes (the diplopia being then less annoying) would explain the preservation of vision in the squinting eye. The most convincing argument, however, in favor of the suppression theory was that the peculiar regional characteristics which the amblyopia exhibited were of just such a nature as we should anticipate if this hypothesis was the correct one, but entirely inexplicable if we supposed the amblyopia to be a congenital defect.

Dr. Noyes dissented from the conclusions of the paper. It had been maintained that before the development of the squint the patients had had binocular vision. There was no proof of this, and the evidence was against it. Again, he had the records of a large number of cases of uniocular amblyopia, presumably of congenital origin, without lesion demonstrable with the ophthalmoscope, in which there had been no squint, although there might or might not have been hypermetropia. Binocular fixation after operation was not infrequent, but, according to his experience, binocular vision was obtained in only one fifth of the cases. It was rare to find material improvement in an amblyopic eye after operation.

Dr. O. F. Wadsworth, of Boston, had convinced himself that the amblyopia of squinting eyes was not due to disuse. He thought that after operation there was no decided improvement in vision. It was sometimes said that there was, but it was largely due to the fact that the vision had not been carefully measured before the operation.

Dr. Harlan had at times attempted to compel a patient to use the affected eye by keeping the fixing eye under the influence of atropine for a long time. In some cases he had succeeded in improving the vision in the amblyopic eye. Some two years later this was still retained, the axis having become straight under the use of correcting glasses.

Dr. Mittendorf said that in certain cases vision was at once improved, and he had thought that this was to be explained by the removal of the undue pressure exerted by the internal and external recti muscles. Taking away this pressure put the eye in a more favorable condition, and we should expect better vision.

Dr. Theobald said that, in regard to the restoration of binocular vision, his test had been as follows: If we covered the eye which formerly squinted, we should find that there was still a balance of power in the internal rectus. If the amblyopia was not of too great a degree, the patient was directed to fix his eyes on a certain object. The squinting eye was then covered, and it at once turned inward. When the covering was removed, it again turned outward, showing that it did so to obtain an image upon a corresponding point of the retina. To his mind that was conclusive evidence of the restoration of binocular vision. He conceded that, where there was a considerable degree of amblyopia, there was no appreciable improvement after operation; but this had no bearing upon the question whether the amblyopia was congenital or due to suppression.

Two Cases of Severe Injury of the Eye with Partial Dislocation of the Lens were reported by Dr. B. Alexander Randall, of Philadelphia.

Badal's Operation (Laceration of the Infra-trochlear Nerve for the Relief of Glaucoma).—Dr. J. S. Prout, of Brooklyn, read a paper on this subject. Badal, of Bordeaux, he said, had proposed laceration of the infra-trochlear nerve for the relief of glaucoma accompanied by pain. He selected this nerve because it was the direct extension of that branch of the ophthalmic, the nasal, from which the eyeball received its nervous supply. It was readily reached by an incision along the margin of the orbit running from the pulley to the upper margin of the tendon of the orbicularis muscle, and is to be taken up with a hook, with its accompanying vessels, and stretched and torn by pulling directly forward. Badal, in 1883, had reported his results in twenty operations, nearly all in cases unpromising for any operation. Pain was relieved at once in ten cases, rapidly in one, and gradually in five, and the result was not stated in four. Tension was relieved quickly in four, relieved gradually in eight, and not relieved in six, and the result was not stated in two. Sight had been long lost in seven. It was improved in four and not improved in four, and the result was not stated in five. Dr. Prout had performed the operation nine times on five patients. All the cases had been unpromising. In one there was for a time decided improvement of vision, in one there was temporary relief from moderate, and in one from severe pain. One was a case of glaucoma simplex operated on without benefit, another a case of hæmorrhagic glaucoma, not benefited. Others had reported much better results. The operation had been shown to deserve further trial. Especially in cases unfit for operations on the eyeball, it could not make matters worse as to the eyes; and relief of pain, even if only temporary, was worth procuring at the cost of so slight an operation.

Dr. C. S. Bull, of New York, said that in his cases, where the operation had been performed for the relief of pain in glaucoma or ciliary neuralgia, while the relief had been marked immediately after the operation, it had been temporary only, the pain having returned in every case.

Advancement of Tenon's Capsule in Strabismus.—Dr. H. Knapp, of New York, read a paper in which he said that this operation, devised by de Wecker five years ago, was performed in the following manner: A piece of conjunctiva 5 mm. wide and 10 mm. long was detached from the region of the insertion of the tendon as a center, leaving a small band near the cornea. Tenon's capsule was now incised near the insertion of the tendon and loosened alongside of and under the muscle. The capsule was then stitched forward with two sutures, entering through the conjunctiva, to the capsule at the lower and upper edges of the muscle and coming out in the conjunctiva above and below the cornea. If the effect appeared too great, the stitches were removed the next day; if not, they were allowed to remain four or five days. During the present summer the author had done the operation ten times. His operation differed from that above described in leaving a broader conjunctival flap and in using a third, middle suture. The results had been quite good in all the cases. In none had there been any alarming reaction. Antiseptic precautions had been employed in all. He preferred advancement of Tenon's capsule to simple advancement of the tendon, because the operation was simpler and attended with less risk. The preservation of the natural attachment exposed the muscle less to inflammation, and there could be no undue retraction in cases of failure. His experience with limited advancement of Tenon's capsule had been quite encouraging.

A Case of Tumor of the Left Occipital Lobe was reported by Dr. Gruening, the chief interest of which lay in the fact that the situation of the disease of the brain was ascertained by the existence of homonymous hemianopsia.

A New Formation in the Vitreous.—Dr. Prout related the case of a young man who had never complained of any trouble with the eyes. In the right eye there was a body arching forward. There was no evidence of any relation to the papilla. The speaker thought that in all probability it was a remnant of the fœtal circulation of the vitreous. In the left eye there was a similar body.

A Lens Series for the Refraction Ophthalmoscope, a **New Series of Test Letters**, and a **Set of Metric Test Letters and Words for determining the Amount and Range of Accommodation** were presented respectively by Dr. Edward Jackson, of Philadelphia, Dr. John Green, of St. Louis, and Dr. C. A. Oliver, of Philadelphia.

A Case of Retinitis Albuminurica in which Premature Labor was induced was related by Dr. S. D. Risley, of Philadelphia. The patient was seen September 24, 1884, between the fourth and fifth month of pregnancy. She had suffered with headache and giddiness. The urine had been examined a week previously and no albumin found. There was marked disturbance of vision. In a previous pregnancy she had had albuminuria, but no trouble with sight. In a second pregnancy there had been no trouble. The ophthalmoscope showed albuminuric retinitis in both eyes. The urine was four fifths albumin. After consultation with her husband (a physician) and Dr. William Goodell, labor was induced and she was delivered of a fœtus at the fifth month. She then passed into an unconscious condition, in which she remained four days. There were no convulsions. As consciousness gradually returned, evidences of right hemiplegia with aphasia were noted. The quantity of albumin gradually diminished. Six months later the lady was able to go about. There were still some traces of aphasia. Vision was greatly improved.

A Modification of the Loring Ophthalmoscope, consisting in the addition of a series of cylinders, was shown by Dr. B. Alexander Randall.

The Frequent Instillation of a Two-per-cent. Solution of Nitrate of Silver in Purulent Ophthalmia was the title of a paper by Dr. Andrews. He had employed this method in twenty-five cases of gonorrhœal ophthalmia, and the eyes were seriously damaged in none of them. The cases were all severe, with much discharge, chemosis, and swelling of the lids. The applications were repeated usually three times a day, sometimes five. The use of the nitrate of silver was graduated to the amount of hyperæmia, and especially to the amount of swelling of the lids.

The Measurement of Astigmatism by Javal and Schiotz's Ophthalmometer.—Dr. Noyes said that the instrument was useful for purposes of rapid determination, for confirmation, and in doubtful cases for diagnosis.

The following papers by Dr. Noyes were read by title: "Burns of the Eye by Fulminate of Silver and Fulminate of Mercury," and "Cases of Foreign Body in the Globe, including Two Cases of Spontaneous Extrusion."

Officers for the Ensuing Year were elected as follows: President, Dr. William F. Norris, of Philadelphia; vice-president, Dr. Hasket Derby, of Boston; secretary and treasurer, Dr. O. F. Wadsworth, of Boston; corresponding secretary, Dr. J. S. Prout, of Brooklyn.

The next meeting will be held at New London, Conn., on the third Wednesday of July, 1887.

Reports on the Progress of Medicine.

GENERAL MEDICINE.

By H. N. VINEBERG, M. D.

Pathological Changes in the Supra-renal Capsules running a Latent Course.—Dr. Felix Fränkel ("Arch. f. path. Anat. u. Physiol. u. f. klin. Med.," ciii, 2) publishes a case of considerable interest in reference to the rôle played by the supra-renal capsules in Addison's disease. The patient, a girl of eighteen, of good family history and of a robust constitution, was suddenly seized one evening in the winter of 1883 with violent palpitation, headache, dizziness, and a feeling of anxiety. Three months afterward she had a similar attack, having enjoyed good health in the interval. In the summer of 1885 she had a third attack. From this on pronounced symptoms of kidney disease manifested themselves, which gradually became more severe. At the time of her admission into hospital she had some hypertrophy of the left ventricle, retinitis albuminurica, with urine containing a large percentage of albumin, but few casts and epithelium. The patient died a short time afterward from uræmic poisoning. The case ran almost a typical course of chronic nephritis, without exhibiting any one of the symptoms that go to make up Addison's disease. At the autopsy, in addition to a moderate degree of parenchymatous inflammation of the kidneys, *the supra-renal capsules were found to have been the seat of very profound changes.* In the right supra-renal capsule a small soft mass the size of a filbert was detected, occupying the site of the left supra-renal capsule, and substituting it was found a large tumor, the size of a closed fist, which on section was of a grayish-brown color and which showed here and there a few hæmatoma. The tumor was closely attached to the left kidney, and when fresh was quite soft. It was preserved in osmic acid for some considerable time and then examined microscopically. It was seen to consist of a thick connective-tissue capsule inclosing a substance made up principally of connective tissue, the interstices of which were filled with large protoplasmic cells, with collections of blood-corpuscles at various points, and numerous spots of pigment discoloration.

Right-sided Endocarditis.—Dr. B. Bramwell ("Am. Jour. of the Med. Sci.," April, 1886) relates his experience with the frequency with which he met endocarditis involving the right side of the heart during the three years that he was pathologist at the Edinburgh Royal Infirmary. During that period there were 97 cases of endocarditis; of these the tricuspid valves were affected in 25 cases = 25·77 per cent. His pathological experience, which is quite different from that of most pathologists, would lead him to conclude (1) that acute inflammation of the tricuspid valve is of frequent occurrence in cases of acute simple endocarditis, and that in severe cases of endopericarditis it is usually present; (2) that chronic disease of the tricuspid valve, the result of endocarditis, is of much less frequent occurrence; (3) that acute inflammation of the tricuspid valve in many cases subsides and is completely cured.

Atrophy of the Stomach.—Dr. Henry and Dr. Osler (*Ibid.*) publish an exceedingly interesting case of atrophy of the stomach that presented during life all the clinical features of progressive pernicious anæmia. Like everything coming from the hands of the latter, the clinical and post-mortem notes show evidences of great painstaking, accurate description and observation. The patient, aged forty-two, a male, was admitted into the Episcopal Hospital, Philadelphia, on June

15, 1885. The illness for which he was admitted dated seven weeks back and manifested itself by weakness, anorexia, perverted sense of taste —everything tasted like pepper—dyspnœa, and vertigo; hæmorrhages had not occurred. His natural weight was one hundred and eighty pounds, but at the time of admission he weighed only one hundred and thirty-nine pounds. His skin was of that peculiar yellowish tint that is almost pathognomonic of progressive pernicious anæmia. With the exception of feebleness of the heart sounds, the results of the physical examination were negative. Repeated microscopical examination of the blood showed a great reduction in the number of red blood-corpuscles, with a normal proportion of hæmoglobin, alteration in the size and shape of the red globules (poikilocytosis), and the presence of microcytes in abnormal amount. An ophthalmoscopic examination revealed retinal hæmorrhages, with the retinal veins much increased in size. In spite of the free administration of iron, arsenic, and other tonics, the patient gradually grew worse, the symptoms of progressive pernicious anæmia becoming more pronounced. On January 10, 1886, an intravenous injection of fifteen fluidounces of a sodium-chloride solution was made with the patient in a semi-comatose condition. At the close of the operation the patient became restless and opened his eyes, but could not reply to questions; the pulse remained the same in frequency (eighty), but became somewhat fuller. The patient died in four hours after the intra-venous injection. At the autopsy, eleven hours after, the only condition found worthy of special mention was extreme atrophy of the mucous membrane of the stomach, the peptic glands being destroyed over the greater portion of the organ. "Toward the pylorus, where the atrophy was less advanced, the various stages of the process could be traced, consisting essentially in a small-celled infiltration between the tubules, such as occurs in all forms of slow interstitial inflammation, and we may reasonably conclude that this process, extending over many years, ultimately led to the condition here described." The man had been a hard drinker for many years, and the authors conclude that the atrophy of the stomach was due to abuse of alcohol. Regarding the other anatomical features of the case, the authors draw attention to their close identity with those of progressive pernicious anæmia, and mention as worthy of special note the large size and healthy appearance of the spleen. They would see in the latter feature a compensatory effort to supply the defects in gastric digestion. Notwithstanding that many authorities deny the existence of a primary atrophy of the mucous membrane of the stomach, the authors think themselves justified in asserting, from a careful study of the above case, that such a pathological condition does occur. The paper is accompanied by several instructive microscopical drawings.

The Chemical Reaction of the Gray Substance of the Brain.—Lagendorff has found ("Ctrlbl. f. klin. Med.," 1886, No. 7) that the accepted teachings of Gscheidlen, Edinger, and others in reference to the acid reaction of the gray substance of the hemispheres hold good only in conditions of death and apparent death, but not in the living state. He made several experiments on rabbits and guinea-pigs, and he found that, if he quickly removed, with a knife or scissors, a portion of the cortical substance, and dried it between layers of cool blotting-paper, a decided alkaline reaction was obtained. When the animals were asphyxiated, the alkaline passed quickly into the acid reaction; but the transformation he holds to be due to the filling of the substance with acid blood, for, when the blood was got rid of, the alkaline reaction gradually returned. The brains of new-born animals, and which exhibit a strongly alkaline reaction, do not become acid either when the animal is bled to death or asphyxiated. The conditions which produce this change in the latter are not known.

Iron in the Organs in Diabetes.—Dr. Stanislaus Zaleski ("Arch. f. path. Anat. u. Physiol. u. f. klin. Med.," civ, 1) has examined chemically and micro-chemically the organs, but more especially the liver and spleen, in diabetes to determine the validity of Quincke's results, which gave as high a per cent. as 3·607 of sugar in the liver of a diabetic patient. Quincke found the sugar in the form of a deposit, and, though his investigations were limited to a single case, he felt himself justified in making the general assertion that iron was to be found as an abnormal deposit in the organs of diabetic patients. Zaleski made a very searching and thorough investigation of one case, the methods and processes of which are given in detail in the paper. He sums up his results and conclusions as follows: (1) Iron appears in the organs in two forms—in the one as an infiltration of every part of the organ, in the other as a deposit—and both forms may be found combined in the same organ. (2) In the first form the iron forms an integral ingredient of the cells of the given organ (at least of the liver and spleen in diabetes). (3) On applying the reagents direct on the organ, "it is necessary to carry out macro-chemical reactions." (4) The microscope is needed for micro-chemical examination only when the iron is in the form of a deposit in considerable quantities. (5) The brownish-red pigmentary deposits which are seen under the microscope in several organs, and which are considered as pathological features, do not in every case of diabetes give an iron reaction. (6) Siderosis of the organs, in Quincke's sense (the iron in the form of a deposit), is not a constant phenomenon of diabetes. (7) A surplus of iron in the liver and other organs, in so far as one can speak of a surplus when the normal quantity is not yet determined, does not occur in every case of diabetes. (8) In the above-described case the iron was found as a slightly stabile compound, probably as an oxy-ferro albuminate. (9) The reaction for iron in the cerebral hemispheres does not fail in every case of diabetes. (10) The quantity of iron in the blood in diabetes may be relatively increased to a considerable extent.

Symmetrical Gangrene (Local Asphyxia).—Hochenegg, in an elaborate article ("Med. Jahrbücher," 1885, 4; "Ctrlbl. f. klin. Med.," 1886, No. 27), gives a very full description of this affection. Raynaud's symmetrical gangrene has become well known to the profession; but there is a particular form of spontaneous gangrene dependent upon trophic and vaso-motor disturbances, or upon defective blood changes, which is not so well known. This condition is not a disease by itself, but a symptom of the most varied pathological changes.

Symmetrical gangrene may be produced by the following conditions: 1. The most varied disturbances of nutrition—such as uninterrupted and prolonged exertion, chlorosis, and chronic anæmia, the latter especially in children. That following acute infectious diseases has the same ætiological factor. 2. In a great number of cases hysteria must be considered the cause. These are particularly characterized by most surprising changes in the phenomena, which must be looked upon as functional disturbances in the central or peripheral nervous system. 3, Symmetrical gangrene, with local asphyxia, is often a symptom of neuritis. The anatomical investigations of Dejerine, Leloir, Monnstein. Pitras, and Vaillard have established this fact. The neuritis is seldom acute, but most frequently of an insidious and chronic form. The change is often quite circumscribed, affecting, for instance, the peripheral branches of the extremities, while the nerve-trunk remains intact. 4. Diseases of the brain and spinal cord, without the intervention of peripheral neuritis, may cause symmetrical gangrene. One of the three cases belonging to this category is detailed at length in the original article, and the anatomical examinations, which are very accurate, are given in full. It was a case of symmetrical gangrene depending upon syringomyelia. This fact agrees with Freud's assertion that patients suffering from syringomyelia are subject to trophical disturbances and necrosis of the skin.

Therapeutically, apart from treating this causal affection, the local asphyxia must be looked upon as a precursor of the gangrene, and, therefore, energetically combated. This is best done by the application of dry warmth to the part, most effectually carried out by enveloping the whole part with cotton-wool. The changes of the cotton-wool should be made in a warm room. Massage is recommended, but irritating ointments and electricity are condemned. As soon as the symmetrical gangrene appears, it must be treated surgically. The author maintains that symmetrical gangrene is more frequent than it has hitherto been stated. He found his five cases among seven thousand out-door patients.

Acetonæmic Epilepsy.—V. Jaksch publishes ("Ztschr. f. klin. Med."; "Ctrlbl. f. klin. Med.," 1886, No. 22) the following interesting case: A young blacksmith, twenty-four years of age, was suddenly seized, in robust health, after an error in diet, with convulsions preceded by violent vomiting. The convulsions continued to increase in intensity for seven days, then gradually grew less violent until they completely disappeared. During the attacks the patient was unconscious; there were first tonic, afterward clonic convulsions; the eyes were turned upward, then followed dyspnœa, and the attack soon passed off. On the second day after the onset of the attacks aceton in great quantities was found in the urine, and continued to be found until the attacks ceased. The fact that aceton in quantities is not found in the urine in primary and secondary epilepsies goes to show that in epileptiform seizures like the above, due to errors in diet, the ætiological factor is aceton, and that the pathological condition is one of auto-infection with aceton. In support of this view the author instituted several experiments on the lower animals by giving them large doses of aceton, which caused tonic and clonic convulsions and coma, and, in addition, grape-sugar was found in the urine. Interesting results were obtained with fermentation experiments, in which aceton was formed in small quantities during the lactic-acid fermentation of sugar. Still no ferment could be found in the intestines which had the property of forming aceton from sugar, though the intestines are inhabited by ferment exciters.

The Cortical Center of Conjugate Deviation.—The seat of the lesion producing conjugate deviation is stated differently by various authors. Grasset places it in a convulsion at the bottom of the fissure of Sylvius. Landouzy localizes it not far from this in the inferior parietal lobe. Charcot and Pitres controvert the latter opinion without asserting any localization. Ferrier, basing his view on his own experiments and on a case related by Chouppe, places it in the second frontal convolution.

A case reported ("Lyon médical," 1886, No. 22) by E. Blane confirms Ferrier's view. Briefly stated, the case was as follows: Marie G., aged fifty-one, was suddenly seized with loss of consciousness and power of movement. She was in complete apoplectic coma, with stertorous breathing and loud tracheal râles. There was marked and constant deviation of the eyes and face toward the left side. The features of the face were intact, and the patient smoked a pipe at both sides of the mouth. The paralysis of the muscles on the right side was complete, and there was paralysis of the sphincters. The patient died on the night of the following day. At the autopsy the right hemisphere was found normal; on the left side a mass of blood the size and form of a hen's egg was found, rising up the meninges, on the external part of the frontal lobe, and completely destroying the foot of the second frontal convolution. The ganglia at the base were intact, and there was no appreciable lesion of the basal arteries.

A Novel Method of Treating Pneumonia.—R. Lepine (*Ibid.*), recognizing the infectious nature of pneumonia, assumes that there are two ways of treating that disease: one by supporting the patient (with alcohol) and tiding him over the attack, the other by acting on the offensive, attacking the belligerents at their point of invasion and endeavoring to annihilate them. R. Lepine has been carrying on the latter mode of warfare during a year, and has met with such success that he wishes to put it before the profession for trial. His method of procedure is as follows: With a long needle of a Pravaz syringe he penetrates an intercostal space, to the depth of 2 to 3 centimetres, into the hepatized portions of the lung, then immediately applies the syringe to the cannula and injects 20-centimetre cubes of some medicated fluid; the needle is then withdrawn a short distance and made to enter another portion of the lung in the immediate vicinity, and the same quantity of fluid injected. This is repeated until four or five injections are made. He has experimented with several medicated solutions, and has had the best results with one of bichloride of mercury (1 in 20,000). The solution of bichloride of this strength he found was not at all irritating to the lung tissue. The only precaution necessary in making the injections is not to penetrate the lung near the root for fear of injuring the large vessels. The author has never seen an untoward symptom follow the injections, but has always observed a marked improvement in all the symptoms.

Acromegalie.—P. Marie ("Rev. de méd.," 1886, No. 4) publishes full notes, accompanied by photographs, of two cases presenting a train of symptoms to which collectively he has given the name of *Acromégalie.* The principal features of the cases were symmetrical enlargement of the feet, hands, and head, coming on in adolescence, marked diminution in the motor power of the extremities, a great tendency to varices, and a decided decrease in the size of the thyroid gland. There was cachexia, apparently more due to the general feeble state than to any grave disorder. The organs appeared to perform their functions normally; in both cases there was great thirst attended with an abundant excretion of urine. Nothing definite could be said of the causation. The author has collected from the literature of the past hundred years five cases, by different authors, which he thinks resemble his two cases, and which should be placed in the same category. He sums up as follows: 1. There exists an affection, characterized particularly by a hypertrophy of the feet, hands, and face, which he proposes to name *acromégalie* (hypertrophy of the extremities). 2. Acromégalie is entirely distinct from myxœdema, Paget's disease (ostitis deformans), and leontiasis ossea of Virchow.

Albuminuria in Health.—Von C. V. Noorden ("Dtsch. med. Ztg.," 1886, No. 2) answers the question, "Does albuminuria obtain in healthy persons, and under what conditions does it occur?" by grouping the observed cases of physiological albuminuria into three classes. Class 1 (a) comprises chiefly young persons, between puberty and the age of twenty, of delicate constitutions. Robust persons beyond that age or children seldom have albumin in their urine. The quantity of albumin undergoes great variation in the course of a few hours. At one period of the day there may absolutely be no albumin in the urine, while in a couple of hours afterward there may be as much as a half per cent. The albumin coagulates readily on boiling; occasionally the urine contains a few hyaline casts, but never any tubal epithelium. The marked variation in the quantity of albumin can not be explained in many cases; in some, however, it can be traced to violent exercise, the partaking of nourishment, and psychical excitement. No pathological change in the kidneys can be assumed in this form of albuminuria, and we must attribute the phenomenon to an individual disposition. In the second class mucin appears in the urine in company with the albumin and in proportionate quantities. The existence of mucin would indicate involvement of the lower urinary passages; still the mucin may be the product of the kidneys themselves. As in the preceding class, the quantity of albumin is decidedly increased during the forenoon. The third class includes cases in which small quantities of albumin appear in the urine without mucin. In a very large proportion of these cases hyaline casts and a few cylinders filled with cells are found. Occasionally also are to be found a few red blood-corpuscles, and a strong suspicion obtains that there exists a temporary circumscribed inflammatory process.

Albuminuria developed experimentally in Man.—M. Schreiber ("Arch. f. exper. Path. u. Pharm.," xix, 3; "Glasgow Med. Jour.") has studied in man the effects produced by compression of the thorax, or a portion of that cavity, the pressure being exerted by means of cushions applied to the anterior and posterior walls of the chest and regulated by screws. Among twenty-six people he found twenty in whom the compression developed a temporary albuminuria or increased a pre-existing albuminuria. Most frequently the reaction of the urine was acid or neutral, rarely alkaline. Microscopic examination was made in only a small number of cases, and once a few hyaline casts, and once a few red blood-corpuscles were found. The albuminuria is due to the presence of serum-albumin and globulin, and peptones are also present. Its duration was one or several hours, all that was needed to prolong it being a repetition of the compression several times in the course of the day. The author does not think this albuminuria due to dyspnœa. He believes that its causes are the diminution of the difference which normally exists between the pressure in the capillaries of the alveoli of the lungs and in the left ventricle, the diminution in the caliber of the pulmonary vessels, and the diminution of the extent of the respiratory excursions. From these there results a stasis in the pulmonary circulation which is rapidly propagated into the vascular network of the kidneys, and hence the filtration of albumin. Whether this filtration occurs in the Malpighian corpuscles or in the convoluted tubules, he has not yet determined.

In a second article M. Schreiber states ("Arch. für exp. Path. und Phar.," Bd. xx, Heft 1 and 2) that in boys of eleven to fifteen years of age thoracic compression for half a minute sufficed in eight out of ten cases to provoke albuminuria (⅛ to ½ per cent.), of which, in general, there is no trace at the end of an hour. In these he found neither peptones nor serum-albuminose in the urine, but only serum-albumin and globulin. The ophthalmoscope showed that the albuminuria was accompanied by no modification of the size or of the color of the vessels in the fundus of the eye.

Miscellany.

American Medical Schools.—H. W. Jones, M. A., M. D. (U. S. A.), writes as follows to the editor of the "Lancet": "It is by no means uninteresting to a medical man 'abroad' to observe his own country and its institutions through the eyes of foreign authorities. And while we must confess to much that was questionable in the past, it appears at present that the case of medical education in the United States is hardly put with fullness—if, indeed, with fairness. As the effete doctrines of the early Church yet serve as the skeptic's best weapons, so now do the allegations which I here rehearse rise against the 'American system.' We are charged with 'inadequate preparation,' opening the schools to crude and undisciplined minds; with a 'too short and narrow curriculum,' giving insufficient and unbalanced foundation for so serious and important a superstructure; with 'poverty of clinical advantages,' committing students to an unpractical, and therefore untrue, view of their future duties; with 'the full degree conferred by any of the too numerous colleges after such a course.' Truly a sad catalogue of errors, if applicable now and generally to the institutions of any country. But a knowledge of all the circumstances will insure material alteration in the scope of these charges and a much closer approximation to the truth. Though I write without statistics at hand, and only from a general acquaintance with the facts acquired by long professional observation, I venture to state that more than half the American graduates have for many years gone out from the three great medical centers, New York, Philadelphia, and Boston, whither have gravitated for the same period the greater lights of the profession as practitioners, teachers, etc. These men, many of them of humble birth, self-taught, having elevated themselves to a great and noble success, do not forget their own origins, and are slow to place impediments in the way of those who have the same aspirations, the same difficult ascent to make. Hence, the moderate requirements of the preliminary examination to be followed in these schools by instruction not easily surpassed in breadth and accuracy, I am bold to say, whether it be didactic or clinical. Here hospitals are numerous and abounding in every variety of material. At Yale and the Cincinnati, Chicago, Michigan, St. Louis, and New Orleans schools the same is true, excepting the restrictions arising from moderate hospital accommodation, which will always vary with population. Here at least a third of the whole number of annual graduates receive their diplomas, and in most of these schools the final or 'pass' examination covers the entire field of study, determining the solid acquirements of the student, rather than what he may have 'crammed' during the weeks previous. In some cases the 'State Medical Society' exercises a wholesome supervision, its delegates taking active part in the oral tests applied to scholarship. Post-graduate courses are often open to the more ambitious student, and to such practitioners of long standing as may desire henceforth to restrict their work to special lines. To 'graduate into a specialty' is not with us *en règle.* It is the 'mushroom school' which gives rise to offenses as rank in the nostrils of American as in those of foreign physicians. These spring up in the growing towns of the vast West, partly the offspring of local ambitions and rivalries, partly from a local demand for a not too costly medical instruction, made by the pupils and assistants of neighboring practitioners, or by youths who labor two thirds of the year to earn the means of defraying the cost of a winter's tutelage in medicine. Few of these ever graduate, and, if they do, few fail to seek their diplomas at a more legitimate fountain-head. The schools themselves meet with early graves, though their example and warning are not long heeded. It is true that all who graduate from these State-chartered schools receive the degree of M. D., and are styled 'doctors,' but in no country in the world does a man so soon find his proper level, whatever his profession or diplomas. It is the absence of social caste, the subordination of influence to real merit, the general indifference to titles, the knowledge that, after all, success must be fought for, which make the American physician so oblivious of the initialed distinctions that obtain in England and elsewhere.

"After all is said, in these days, when science is of common birth and acknowledges no single foster-mother, we may safely claim to be known by our fruits, and one may proudly point to the just and able criticisms of your own columns upon works of American origin for highest testimony to the value and volume of American professional attainment and culture."

The French Surgical Congress.—By the programme published in a recent number of the "Union Médicale" we learn that the following subjects will be considered: *The nature, pathogeny, and treatment of tetanus* (to be opened with a paper by Dr. A. Socin, of Bâle, entitled "Observations on the Ætiology of Tetanus, going to show that Tetanus is a Parasitic Disease"); *nephrotomy and nephrectomy* (papers by Dr. Jeannel, of Toulouse: "Case of Nephrectomy followed by Death, where the Renal Tumor was recognized during Laparotomy for Intestinal Obstruction; Dr. Péan, of Paris: "A Communication relating to the Methods of Nephrectomy and Nephrotomy; Dr. J. Boeckel, of Strassburg: "Transperitoneal Nephrectomy for Hydatid Cyst of the Kidney; and Dr. Bouilly, of Paris: "Three Cases of Nephrotomy"); *orthopædic resections* (discussion by Dr. Mollière, of Lyons, Dr. Vaslin, of Antwerp, and Dr. Ollier, of Lyons); *operative interference in irreducible traumatic luxations* (paper by Dr. Lagrange, of Bordeaux—discussion by Dr. Mollière, of Lyons, Dr. J. Reverdin, of Geneva, and Dr. Polaillon, of Paris). In addition, papers are to be read as follows: "Drainage and Primary Union," by Dr. Chénieux, of Limoges; "Torsion of the Pedicle of Ovarian Cysts," by Dr. Terrillon, of Paris; "Vaginal Hysterectomy," by Dr. Richelot, of Paris; "Pseudo-scrofula from a Surgical Point of View," by Dr. Chaumier, of the department of Indre-et-Loire; "Bone-grafting in Extensive Losses of Bone," by Dr. Poncet, of Lyons; "Rupture of the Perinæum—its Causes, Effects, and Prevention," by Dr. Jules Hue, of Rouen; "Suprapubic Removal of a Papilloma of the Bladder," by Dr. Desnos, of Paris; "The Present Operations for Cataract," by Dr. Abadie, of Paris; "Posterior Ophthalmotomy in Sanguineous and Serous Intra-ocular Effusions," by Dr. Galezowski, of Paris; "The Use of the Thermo-cautery in Ocular Surgery," by the same; "Paget's Disease," by Dr. Chalot, of Montpellier; "Total Ablation of the Upper Limb with the Scapula," by the same; "The Accidents following Total Removal of the Thyroid Body," by Dr. J. Reverdin, of Geneva; "Operative Procedures for Varicocele," by Dr. Le Dentu, of Paris; "Urinary Analysis in Abdominal Surgery," by Dr. Thiriar, of Brussels; "Modifications of Trephining in Cerebral Accidents following Injuries of the Skull," by Dr. Vaslin, of Antwerp; "Osteomyelitis and its Treatment," by the same; "Congenital Coccygeal Tumor," by Dr. Leriche, of Lyons; "The Radical Cure of Non-Strangulated Epigastric Hernia," by Dr. Terrier, of Paris; "Resection of the Knee," by Dr. Lucas Championnière, of Paris; "Trephining for Simple and Tubercular Osteitis," by the same; "A New Operation for Recto-vaginal Fistula," by Dr. P. Reclus, of Paris; "The Diagnosis and Treatment of Cysts of the Vagina," by Dr. S. Pozzi, of Paris; "The Surgical Treatment of Prolapse of the Uterus," by Dr. A. Marchand, of Paris; and "The Temperature in Anthracose Diseases," by Dr. Maunoury, of Chartres.

A Monument to the late Professor Panum.—We learn from "Progrès médical" that a subscription was opened at Copenhagen last year for the purpose of erecting a monument to the memory of the distinguished president of the last international medical congress.

The "Pacific Record of Medicine and Pharmacy."—It is announced that a new monthly journal bearing this title, printed partly in Spanish, will be published in San Francisco on the 15th inst.

A Sanitary Convention is announced to be held at Big Rapids, Mich., under the auspices of the State board of health, on Thursday and Friday, November 18th and 19th. Discussions are expected to be held on the following subjects: "The Sewerage and Drainage of Big Rapids," "The Water Supply of Big Rapids," "The Hygiene of Schools, with special reference to Big Rapids," "Pasteur and Protective Medicine," "Public Health Laws," "The Sanitary Needs of the City of Big Rapids," "Alcoholic Drinks—are they Foods or are they Poisons?" "The Injuries of every-day Drug-taking," "What to Eat, When, and How," "The Care of the Eyes," and "The Prevention of the Communicable Diseases."

The Health of Michigan.—The returns made to the State board of health for the four weeks ending July 31st included reports of diphtheria from thirty-five places, of scarlet fever from twenty-two, of typhoid fever from seventeen, of measles from ten, and of small-pox from two.

THERAPEUTICAL NOTES.

Pencils of Ointments and Pastes.—Pencils of stiff ointments, and others soluble in water, are largely employed in dermatological practice by Dr. P. G. Unna, of Hamburg ("Monatsh. f. prakt. Dermat.," 1886, No. 4; "Ctrlbl. f. d. ges. Therap.," July, 1886, p. 324). The ointment pencil (*Salbenstift*) is termed *stilus unguens*, and the paste pencil (*Pastenstift*) *stilus dilubilis*. The following formulæ are given:

Stilus acidi salicylici dilubilis:

Precipitated salicylic acid	10 parts;
Powdered tragacanth	5 "
Powdered starch	30 "
Powdered dextrin	35 "
Powdered white sugar	20 "

This is of the strength of 10 per cent. The next formula is for a 40 per cent. compound:

Precipitated salicylic acid	40 parts;
Powdered tragacanth	5 "
Powdered starch	10 "
Powdered dextrin	25 "
Powdered white sugar	20 "

Stilus arsenico-sublimatus dilubilis:

Powdered arsenious acid	10 parts;
Corrosive sublimate	5 "
Powdered tragacanth	5 "
Powdered starch	30 "
Powdered dextrin	30 "
Powdered sugar	20 "

Stilus cocainæ dilubilis:

Cocaine hydrochloride	5 parts;
Powdered tragacanth	5 "
Powdered starch	35 "
Powdered dextrin	35 "
Powdered white sugar	20 "

Stilus iodoformi dilubilis:

Iodoform	40 parts;
Powdered tragacanth	5 "
Powdered starch	10 "
Powdered dextrin	30 "
Powdered white sugar	15 "

Stilus acidi pyrogallici dilubilis:

Pyrogallic acid	40 parts;
Tragacanth	5 "
Powdered starch	13 "
Ethereal extract of orleana	2 "
Dextrin	20 "
Powdered white sugar	20 "

Stilus resorcini dilubilis:

The purest resorcin	40 parts;
Powdered tragacanth	5 "
Pure starch	10 "
Powdered dextrin	25 "
Powdered white sugar	20 "

These mixtures are made into pastes with a small amount of water, and the pencils are made of the size of an ordinary lead-pencil and of about the length of the finger. They may be coated with tin foil, and those containing a mercurial with collodion.

Stilus acidi borici unguens:

Boric acid	20 parts;
Yellow wax	40 "
Olive-oil	35 "
Rosin	5 "

Stilus cannabis unguens:

Extract of *Cannabis indica*	10 parts;
Rosin	5 "
Yellow wax	45 parts;
Olive-oil	40 "

Stilus acidi salicylici unguens:

	40 per cent.	10 per cent.
Precipitated salicylic acid	40 parts;	10 parts;
Rosin	5 "	5 "
Yellow wax	25 "	45 "
Olive-oil	30 "	40 "

Stilus chrysarobini unguens:

Chrysarobin	30 parts;
Rosin	5 "
Yellow wax	35 "
Olive-oil	30 "

Stilus hydrargyri oxidi rubri unguens:

Red oxide of mercury	5 parts;
Powdered Venice soap	10 "
Rosin	5 "
Yellow wax	40 "
Olive-oil	40 "

Stilus iodoformi unguens:

Iodoform	40 parts;
Rosin	5 "
Yellow wax	30 "
Olive-oil	25 "

Stilus iodi unguens:

Pure iodine	20 parts;
Rosin	5 "
Yellow wax	40 "
Olive-oil	35 "

Stilus acidi pyrogallici unguens:

Pyrogallic acid	30 parts;
Rosin	5 "
Ethereal extract of orleana	2 "
Yellow wax	35 "
Olive-oil	28 "

Stilus resorcini unguens:

Pure resorcin	30 parts;
Rosin	5 "
Yellow wax	35 "
Olive-oil	30 "

Stilus saponis, picis et ichthyoli unguens:

Dry potash soap	10 parts;
Pitch	10 "
Sodium thioichthyolate	5 "
Rosin	5 "
Yellow wax	40 "
Olive-oil	30 "

Stilus sublimati unguens:

Powdered corrosive sublimate	1 part;
Powdered Venice soap	25 parts;
Rosin	5 "
Yellow wax	35 "
Olive-oil	34 "

Stilus sulphuris unguens:

Precipitated sulphur	20 parts;
Yellow wax	40 "
Olive-oil	35 "
Rosin	5 "

Stilus zinci oxidi unguens:

White oxide of zinc	20 parts:
Yellow wax	40 "
Rosin	5 "
Olive-oil	35 "

Stilus zinci sulphocarbolatis unguens:

Sulphocarbolate of zinc	5 parts;
Powdered Venice soap	15 "
Rosin	5 "
Yellow wax	40 "
Olive-oil	35 "

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Lectures and Addresses.

LECTURES ON
THE DIAGNOSIS AND TREATMENT OF DISEASES OF THE CHEST.

DELIVERED BEFORE THE ASCLEPION CLUB,

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Lecture II.

The Diagnosis and Therapeutic Indications in Chronic Diseases of the Lungs.

We will begin the consideration of the chronic pulmonary diseases by a short reference to some important points to be observed in treating chronic bronchitis.

The first consideration, as far as the local disease is concerned, is to ascertain the extent of the lesion, both as to the superficial area involved and the depth to which the anatomical changes penetrate.

The majority of cases of so-called chronic bronchitis are simply catarrhs, which extend from the larynx downward into the trachea, and perhaps into the primary bronchi. They occur in persons of relaxed habit, in those who are in the decline of life, in strumous children, and in the subjects of the gouty diathesis.

Many of these bronchial catarrhal cases are accompanied by nasal and naso-pharyngeal catarrh, and, in some instances, if not directly due to the extension of that disease downward, are, at any rate, aggravated and kept alive by it.

The patients are moderately well, frequently have good appetites, and experience little discomfort, excepting from the cough, particularly in the morning, a little shortness of breath on exertion, and an expectoration of muco-pus. Though not notably sick, they are frequently somewhat anæmic, and, as before observed, of relaxed habit—*i. e.*, there is a loss of tone, both muscular and vascular. Many persons inherit a tendency to catarrh—that is, the tendency is inborn and due either to direct inheritance or to some unknown causes acting upon the development of the body. Others acquire such a tendency through exposure to bad hygienic surroundings during infancy and childhood.

Such persons may be said to have a *catarrhal diathesis.* The vulnerability exists not only in the mucous membranes of the respiratory passages, but in others, particularly the gastric and vesical, and, in females, the utero-vaginal membranes.

This condition is closely allied to the strumous diathesis, but differs from it in that it involves no special tendency to the development of tuberculosis.

The general therapeutic indications in these milder forms of chronic bronchitis are easily deduced from what has been said in regard to their general pathology.

In the first place, if the laryngeal and bronchial catarrh is dependent upon or aggravated by a similar condition of the throat and naso-pharyngeal recess, this primary trouble must of necessity be either cured or ameliorated before any great improvement in the secondary disease can be looked for. In fact, in all cases of chronic bronchitis, the upper air-passages should receive attention (for many of the failures in the treatment of this disease are due to neglect of this precaution). I have seen a case of chronic bronchitis with very copious muco-purulent expectoration, dyspnœa on exertion, and general debility—after resisting several different courses of medicinal treatment by expectorants and cough mixtures, administered by different medical gentlemen—entirely cured by the local treatment of a nasal catarrh in combination with tonics and gymnastics.

The catarrh of the larynx and bronchi will also yield more readily to local than to internal medication, with some exceptions to be mentioned hereafter. The local treatment is best conducted by means of some spraying apparatus. The best are those of Sass, and the atomizer of Dr. Evans. Each has its advantages and disadvantages.

The advantages of Sass's apparatus are, first, that, with a good pressure, say twenty pounds to the square inch, it thoroughly and quickly cleanses the mucous membranes from the anterior nares down, certainly as far as the bifurcation of the trachea; second, that it deposits upon the pathologic membrane a large quantity of the medicinal agent in a short time; and, third, that it probably sends more spray deep into the air-passages. A very important collateral advantage is that it does not consume much of the practitioner's time. Its disadvantage is that it can only be used in the physician's office, unless he should have several and keep them at the houses of those patients who are unable to come to his office. The advantages of Dr. Evans's inhaler are that it is portable and less expensive; that it can be used by the patient himself, though it is rather expensive for the majority; and that the spray, being very finely pulverized, is inhaled with very little irritation, so that the most sensitive patient may use it if the solution is made mild enough. Its prolonged use may also be of service in some cases where it is necessary to obtain an emollient effect. Its disadvantages are, first, that we do not get so great a volume for douching the cavities, so that the time occupied by the *séance* must be considerably prolonged; second, the amount of the medicated fluid introduced into the air-passages is not nearly so great as with Sass's apparatus, and, therefore, though it may penetrate as deeply, much less of the medicinal substance reaches the smaller bronchi in a given space of time, making it necessary to prolong the application very considerably in order to get the same result. The disadvantages might be all summed up in this, that too much time is required to make it feasible for office practice. It has the general advantage over Sass's apparatus that it can be managed by the patient himself.[*]

The various hand-ball atomizers are almost worthless, and can only be of use as auxiliary modes of treatment.

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[*] Dr. Evans uses, in his office, a pressure of forty pounds to the square inch. With this pressure, unattainable at the house of a patient, he tells me that he gets much better results than with the ordinary portable apparatus.

Though the local treatment is so valuable, yet the internal administration of drugs should not be overlooked. Many cases may be entirely relieved by general constitutional treatment. These are particularly the anæmic and strumous cases. Here the great remedy is the tincture of the chloride of iron. It is best given with the chloride of ammonium and glycerin. The dose of the tincture should vary from five minims to forty minims, according to the age and condition of the patient. The dose of the ammonium chloride should vary from two grains to ten grains, the latter very seldom; half a drachm of glycerin is the proper quantity for an adult, and less in proportion for young subjects.

The iron is a tonic; it corrects the atony of the vessels and muscles. It also acts as an astringent, diminishing the quantity of secretion. The dose is regulated according to these properties and the necessity which exists for the employment of them. In some cases the use of any astringent is followed by an unpleasant dryness and irritability of the mucous membrane. Then the iron may be left out, and the ammonium chloride and glycerin given together; and, for the tonic effect, quinine may be separately administered. The ammonium chloride is of use because of its well-known, though somewhat obscure, effect upon the mucous glands. It certainly tends to restore the secretion to its natural state, but how I do not know. It is given in larger doses when the cough is more dry, and in smaller quantities when it is moist. Thus these two remedies—the tincture of the chloride of iron and the chloride of ammonium—act somewhat as checks upon each other. The glycerin has a double action: first its local effect on the gastric mucous membrane, which is salutary, and, second, its laxative influence upon the bowels, counteracting the constipating effects of the ferric sesquichloride.

Other constitutional conditions must be met by suitable remedies; the scrofulous tendency by cod-liver oil, syrup of the iodide of iron, bichloride or iodide of mercury, arsenic, and other alterative drugs. The best alterative would probably be a perfect hygiene, but we can so seldom attain it that we must resort to drugs to help us out. I think, too, that in many instances hygiene is not enough, but must be assisted by drugs. The best hygienic measures are well-regulated exercise and bathing.

While the local treatment is best suited for some cases, and the constitutional for others, it is safe to lay down the rule that the two should be combined in all cases in order to secure the best results.

Chronic bronchitis, in association with dyspepsia or the gouty diathesis, deserves a separate notice. In such cases the symptoms peculiar to those affections are present, and furnish the indications for treatment. It is generally impossible to cure the catarrhal affection before the dyspeptic or gouty tendency is relieved. The dyspepsia is usually due to chronic gastric catarrh, and is to be cured by the remedies suitable to that disease.

In the more chronic forms of bronchitis, when it has existed for many years and become complicated by emphysema, the outlook is not so hopeful. The inflammatory process extends to the middle and outer coats of the tubes, which become changed by the development of new connective and glandular tissue, and lose their elasticity. The trachea and bronchi become somewhat dilated, the mucous membrane thickened and red, and an abnormal secretion is constantly poured out. It is still possible to afford relief, sometimes for quite long periods, by properly directed treatment; but the membrane does not return to its normal condition, and very slight causes—such as indigestion, debility, and moderate exposure—will quickly induce a relapse. Such patients usually become discouraged, and either drift from one physician to another, or else become the victims of the venders of patent nostrums. There is, however, much that can be done for them. Their lives may be considerably prolonged by keeping the bronchitis under control and quickly breaking up any acute exacerbations which may occur. Much can be done by local treatment—more than in any other way. This should be conducted by means of astringent sprays, either simple or combined with stimulating or sedative substances, according to the degree of irritation or relaxation of the mucous membrane. The prolonged use every day, or every other day, of such an apparatus as Dr. Evans's inhaler is very useful. The spray may also be introduced by means of some pneumatic apparatus, some of the modifications of Waldenburg's idea, *e. g.*, the pneumatic cabinet of Williams. The inhalation of compressed (or relatively compressed) air should, however, be managed with great care, pains being taken to avoid too much distension of the lungs and bronchi. Inhaling compressed air at a very low degree of pressure—say, one sixtieth of an atmosphere—and exhalation into the normal air, would probably be the best. We need more experience by competent observers upon these points. The constitutional treatment of such subjects should be regulated in accordance with their needs. If they are old and debilitated, a moderate amount of alcohol, taken regularly, is of great service. Wines, not too sweet, and spirits are the best.

Ferruginous tonics are useful. The most intractable cases occur in persons who are encumbered by much soft and flabby adipose tissue, with relaxed abdomens and weak hearts. They are sometimes benefited by the combination of iron with saline cathartics. A dry diet, largely nitrogenous, if they can be made to digest it, is an important item in their treatment. But it must be confessed that the prognosis in such cases is not good.

The chronic bronchitis of cardiac and renal disease is only amenable to treatment when the primary trouble can be ameliorated. If it does not disappear spontaneously with the improvement in the heart or kidneys, it should then be dealt with as if it were a simple case.

The question of counter-irritation in chronic bronchitis is an interesting and important one. Such active counter-irritants as croton-oil, Corson's paint, or tartar emetic are seldom, if ever, required. They annoy the patient, disturb his rest, and do not benefit him enough to compensate him for the sufferings which they cause. Painting with iodine, or the use of stimulating liniments, is sometimes of service. When acute exacerbations occur, mustard, tupentine stupes, and iodine are valuable aids in reducing the inflammation.

Change of climate is always worthy of a trial when the patients are so situated as to be able to avail themselves of it.

When the secretion is very profuse, in addition to the local treatment by inhalation we may try large doses of the tincture of the chloride of iron, nitrate of iron, or the mineral acids. If these are ineffectual, the balsamic and terebinthinate drugs may succeed. I have used the Lafayette mixture of copaiba, as it is commonly prescribed for gonorrhœa, with very considerable success in some obstinate cases. Professor W. H. Thomson, in his able article on "Bronchitis" in Wood's "Reference Hand-book of the Medical Sciences," recommends the administration of carbolic acid, in pills, to the amount of ten or twelve grains a day. He also professes to have obtained good results from twelve grains of carbolic acid and half an ounce of paregoric in a pint of water, the whole to be taken in the course of a day. We can hardly agree with him that this would have any antiseptic effect upon the secretion lying in the bronchial tubes.

Bronchiectasis, or dilatation of the bronchial tubes, is not a disease of itself, but always secondary either to chronic bronchitis or to chronic interstitial pneumonia. When it occurs as a result of chronic bronchitis, the mode of its production is somewhat similar to that of aneurysm. The chronic changes in the coats of the bronchial tubes destroy their elasticity, and diminish their resistance to a displacing force. During inspiration there is a relatively increased pressure upon the walls of the tubes, tending to dilate them; but during expiration the normal elasticity of the healthy tubes restores their original caliber. If, now, the elasticity is lost, there will be a slow yielding in the direction of dilatation. This is exactly parallel to the mode of production of a true aneurysm. The elastic walls of the artery lose their resiliency, and, when forcibly distended by the blood which is propelled into them by the contraction of the ventricle, they fail to return to their normal size, and so, with every sufficiently strong pulsation of the heart, the vessel is slightly dilated. In the bronchi those parts which are weakest will yield first, and so we may account for the sacculated and tubular shapes, with all their modifications.

In chronic interstitial pneumonia the respiratory factor may also be efficient in dilating the tubes, but there is added to it the direct traction of the shrinking connective tissue. As the lung shrinks, the tubes dilate.

The diagnosis of bronchiectasis, when it results from chronic bronchitis, is not always easy. It depends on the fœtor of the sputa, on the accumulation of fluid, puriform secretion, which is expelled in large quantities when some change of position allows the cavity to empty its contents into the larger bronchi or trachea, and on the physical signs of a cavity or cavities. These points are observed in connection with sacculated bronchiectatic cavities. The tubular dilatation, frequently very extensive, is only to be suspected from the long history of the case, from fœtid expectoration, which does not accumulate in large quantities in the tubes, and from alterations in the physical signs. These consist in more or less marked tubular breathing, with moist râles of medium size, prolonged, usually low-pitched, expiration, and an alteration of the vocal fremitus which will vary with the condition of the lung, in the vicinity of the expanded tubes.

The treatment of this bronchiectasis is included in that of the two diseases which give rise to it.

(*To be concluded.*)

Original Communications.

FIFTY CASES OF ABDOMINAL SECTION

(*SECOND SERIES*).

By JAMES B. HUNTER, M. D.,

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In reporting a second series of fifty cases of abdominal section I have followed the plan adopted in publishing the first fifty cases in the "New York Medical Journal" for April 4, 1885. An outline history of each case is given in tabular form, with some additional explanatory remarks in cases that seem to warrant it. The whole number of cases reported is too small for useful generalization; too small for statistical argument; too small to support any theory or establish any method. It is not too small, however, to afford additional evidence in favor of operating in some doubtful cases, in some very bad ones, and in some cases where the diagnosis has to be made chiefly from the symptoms. In certain of the cases of what is appropriately known as Tait's operation the results have been surprisingly good, the patients having been rescued after years of invalidism and suffering, and restored to the enjoyment of perfect health.

I have little to add to the remarks made in previous papers on the method of operating. I still use the spray, wherever it can be obtained, for an hour or more before the operation. I use carbolic acid freely and thoroughly, and the bichloride sparingly, unless there are special indications for a powerful disinfectant. Water that has been boiled is used for all the solutions. For irrigation I have used with much satisfaction the double drainage-tube of Dr. H. Marion-Sims.

In every particular I have simply endeavored to do the best that was possible for each individual case, and have been content to let the statistics take care of themselves. Any considerable number of cases of abdominal tumors, taken as they come—and especially as they come to the Woman's Hospital—will necessarily include some cases not entirely hopeless, but desperately bad and very unpromising. It is the duty of the surgeon to do his best in every case that admits of operation; to avail himself of every means, from whatever source, that promises to help his patient or add in the slightest degree to her chances of recovery. Only thus can really valuable statistics be obtained.

In the whole number published there will be found seven cases of hysterectomy for uterine fibroids, with two deaths; one case of removal by abdominal section of a pediculated uterine fibroid, with recovery; one case of the removal of a solid fibroid tumor of the ovary, with recovery; thirty-nine cases of completed ovariotomy, with seven deaths; and of Tait's operation, completed, seventeen cases, with two deaths. Of the latter operation it is yet too soon in the recent cases to judge of the ultimate result, as it often requires a year, and sometimes more, for the benefits of the operation to become thoroughly established. This is true of any operation that brings about the menopause.

Case I.—This patient had been under observation for two months before her admission to hospital. The tumor had been pronounced ovarian, but, as it gave rise to no serious symptoms, the patient was allowed, at her own request, to wait for a time. Suddenly she complained of severe pain, and she was immediately admitted to hospital. Her temperature was found to vary from 101° to 103° F., and her pain was so severe as to require the constant use of morphine. The abdomen was very tender and the pulse rapid. The diagnosis of inflammation of the cyst was made, and the operation was done as early as possible. The day of the operation the temperature was 103° in the axilla and pulse 140. The surface of the tumor, as seen on making the incision, was of a dark-purple color, having large veins prominent on its surface. On raising the mass, which was on the right side, the pedicle was seen to be twisted five times on itself. It was transfixed and tied with silk, and the tumor removed. The weight of the mass was about three pounds and a half. The contents were partly colloid, and there had been recent hæmorrhage into the cyst. The tumor had evidently been strangulated by the twisting of the pedicle. A small tumor was found on the left side also, and removed in the same way. The wound was closed at once without a drainage-tube. The temperature nine hours after the operation was 98·5° and pulse 120. The patient made an uninterrupted recovery, the temperature never rising above 101°. Seen a year after operation, the patient was in perfect health and had grown somewhat stout.

The case exemplifies one of the dangers of postponing operation when an ovarian tumor of any size has been clearly made out. Had it not been possible to operate until twenty-four hours later, the woman would probably have died of peritonitis, from strangulation of the tumor, or of rupture of the veins of the cyst. The intestines and tumor were very slightly attached by threads of lymph, easily broken by the hand.

Case II.—This patient had suffered for two years from extreme pain before her period, and a very excessive flow. The nature of the mass was distinctly made out by vaginal examination several months before the operation. It was increasing in size, and the pain was becoming constant.

Had a large drainage-tube been put in at the time of operation, and thorough irrigation kept up, the chance of recovery would have been better. The tube was used too late. The condition of the patient before operation was very unfavorable, as she had long been subject to severe hæmorrhages and almost constant pain.

Case III.—There were very dense adhesions in this case, the dilated tube hugging one half of the uterus firmly. The uterus was large and globular, having the appearance of a fibroid tumor. There was so little bleeding that no drainage-tube was deemed necessary. Recovery was good and uninterrupted.

Case IV.—The operation in this case was undertaken as a last resort, and at the special desire of the patient, who wished to have what slight chance there might be of at least prolonging life. She was failing so rapidly in health that a diagnosis of probable malignant disease was made. The tumor was increasing in size almost perceptibly day by day. The patient had the appearance of a woman sixty-five years of age.

Case V.—In this case the patient was supposed to be doing well until the day of her death, ten days after the operation. There was more pain than usual and much nausea, but the temperature seldom rose above 99°. The sutures were removed on the eighth day, and the wound was dry and looked well. Three days later, at 2 p. m., there was a sudden attack of faintness, with a very feeble pulse. Under vigorous stimulation, oxygen, etc., there was no improvement, and death occurred eight hours afterward. The post-mortem showed extensive peritonitis, and a large accumulation of pus between the abdominal muscles and fascia. There was no communication, as far as could be ascertained, between the cavity containing the pus and the peritonæum. The wound was very small, measuring barely two inches in length, and was subjected to very little handling or sponging. The operation was performed with the most careful antiseptic precautions, and there seemed no reason, external to the patient, why recovery should not take place. The unfavorable course which followed was probably due in great part to the miserable physical condition of the patient, who had been an invalid for several years, and had suffered much mental anxiety besides. Her dysmenorrhœa was extreme, and the prostration following each period was so great and prolonged that the girl was practically bed-ridden, and her life a burden to her.

This is not the only case in which I have known peritonitis to develop and lead to a fatal termination without any marked rise of temperature, or a very rapid pulse. Pain is sometimes absent also, and abdominal distension is not invariably present.

Case VII.—Peritonitis developed on the third day and the temperature went above 103°. Frequent irrigation by means of the drainage-tube regularly brought down the temperature, and doubtless saved the patient's life.

This patient reported a year after the operation that she was perfectly well, free from all pain, and able to support herself by work as a teacher. Before the operation she had been incapacitated by pain from doing any work, and for a year had been growing surely worse. Life had become intolerable to her. For one year she had, by the advice of her physician, made a thorough trial of all the remedies usually resorted to in such cases, including galvanism, blisters, rest, etc.; and as a last resort she submitted to the operation.

One such case as this outweighs a volume of argument against the practice of removing ovaries when they are hopelessly diseased, and the patient is ambitious to become something more useful than a chronic invalid.

Case X.—This patient was suffering intense abdominal pain the greater part of the time. In 1883 she had the left ovary removed for the relief of dysmenorrhœa, but had been no better afterward. In breaking up adhesions, about four inches of the small intestine had been removed and the cut ends united. Pain continued after the operation. At the earnest request of the patient and her husband, an exploratory incision was made, and the right ovary and tube were removed. The intestine was firmly adherent to the abdominal wall, and the lines of former intestinal sutures were plainly visible. Recovery from the operation took place without any bad symptoms; but no relief had been afforded six months later, when last heard from.

Case XI.—This woman had been obliged to give up her work because of pains at irregular intervals, but frequent and severe. Menstruation had been very scanty and infrequent; but at the time when it should have come the pain was intolerable. Blisters and galvanism were given a fair trial, but had no effect whatever. Both ovaries were found to be cystic, and the tubes thickened and nearly occluded. The pains have become much less severe, and the patient is looking much better and is able to do light work and support herself. The periodical pain has entirely gone.

Case XIII.—The metrorrhagia in this case was threatening life, and had already seriously affected the general health. In the hope of arresting it, the ovaries and tubes had been removed by Dr. Thomas one year before, but there was no abatement of the symptoms. The uterus was found to be large and vascular, and firmly attached to the left horn was a loop of intestine. This was detached with the fingers. A wire clamp was applied as near the cervix as possible, and the body of the uterus was removed. The pedicle was transfixed with long needles and cauterized. The wound was closed up directly against the stump. Peritonitis threatening, a glass tube was put in the next day, but without effect. There was no hæmorrhage; but the patient died of shock on May 30th.

Case XIV.—This patient was a lady's maid, and, though making a great effort to do her work, had been obliged to spend much of the time in bed, and had been quite unfit for work for some months. For two years she had been growing worse; she had intolerable pain before menstruation, which was at times scanty and at times profuse.

In September, 1885, she reported that she was perfectly well and able to do more than she had done for years, and to enjoy her work. Ten months after the operation she continued perfectly well, and looked like another woman, comparatively stout, and with a clear and ruddy complexion, looking literally ten years younger.

Case XV.—From the time of her marriage, nine years before the operation, this patient had been subject to epileptic seizures. She was not sure that she had had any well-marked attack before marriage. At first the seizures occurred only once in the month—at the time of menstruation. The attacks then increased in frequency and severity, notwithstanding active treatment by bromides and other drugs. For over a year before the operation she had been subject to attacks at least once a week, and sometimes twice. Her nervous system had suffered severely, and she had much the appearance of a patient exhausted by some malignant disease. The fact that the epilepsy had at first a direct connection with the menstrual period seemed to indicate the propriety of artificially arresting the menstrual process. Apart from this consideration, it was evident that the ovaries were abnormally large. They proved, on removal, to be cystic throughout, and to have undergone degenerative change. For three months after the operation there were epileptic attacks, but less severe, and much less frequent than before. They then diminished in severity and became less frequent until nine months after the operation, when they ceased entirely. The patient reported June 5, 1886, and had not then had an attack of any kind for three months. She had gained in weight and health, and felt as she had not done for nine years past.

There is good reason to expect a permanent cure in this case; but the patient will be kept under observation, and reported on hereafter.

Case XVI.—There was found in this case an ovarian tumor containing dark, grumous, and colloid contents. The lower half of the sac was adherent to the intestines, the uterus, and the pelvic brim. Neither removal nor enucleation was possible. The free portion of the sac was, therefore, excised, and the remainder left in place, with a large glass drainage-tube in it, reaching to the bottom. The abdominal wound was closed round the neck of the sac, the peritonæum being stitched carefully at the upper and lower angles to the exterior of the cyst wall. The cyst was irrigated with carbolized water as often as was necessary to keep it sweet—generally every three or four hours. The cavity rapidly diminished in depth, and shorter tubes were substituted, from time to time, for the long one. For some days there were symptoms of peritonitis, but the constant use of the cold coil kept the temperature down. The patient made a good recovery, was able to do her duties as lady's maid early in August, and has been at work ever since.

Case XVII.—A diagnosis of uterine fibroma had been made in this case by two experienced surgeons. There was a mass, apparently solid, filling the pelvis and crowding the uterus down. With the sound passed into the uterus, however, a slight independent movement could be effected. It had a history of having grown entirely within eleven months. Menstruation had not been influenced by the tumor.

On making a small incision, a hard, white, glistening mass appeared, flat on one side and convex on the other or lower, and having within it a small isolated cyst, which ruptured as the mass was raised. The contents looked like ascitic fluid, and escaped into the abdominal cavity. The incision was enlarged and the tumor easily removed, there being no adhesions and a small pedicle, like that of an ovarian cyst. The growth had certainly no connection with the uterus, and proved, on examination, to be a fibroid tumor of the left ovary, the first case of the kind in my experience. The weight of the mass was nearly two pounds. The patient made a good recovery.

Dr. Homans, of Boston, writes me that he met with his first case of ovarian fibroid in May, 1885. Mr. Thornton reports that the first case he had met with was in the autumn of 1884.

Case XVIII.—There is nothing remarkable about this case. There was a large cystic ovary, with obstinate retroversion of the uterus, and consequent dysmenorrhœa. With the removal of the ovary the uterus resumed its normal position, and all the other symptoms have disappeared. Palliative treatment, pessaries, etc., had been tried for eighteen months before the operation was advised.

Case XIX.—The operation in this case was peculiarly difficult, owing to the very extensive adhesions and the necessity of tying a large number of bleeding points. The danger of the operation was fully appreciated by the patient, but, as the tumor was growing very rapidly, she preferred to incur the risk of its removal rather than to die a lingering death. She was already much emaciated, and suffered greatly from pain and dyspnœa. The operation was done only after consultation with my colleagues in the Woman's Hospital, but it was not one to be undertaken by a compiler of favorable statistics.

Case XXI.—The operation of removing the ovaries and tubes was undertaken in this case with the view of arresting menstruation and thus diminishing the frequency and severity of the epileptic attacks, from which the patient had suffered ever since she first menstruated. Examination under ether revealed slight enlargement of the ovaries, but the symptoms, the failing health, and the increasing mental disturbance, seemed to render the operation imperative as holding out the last and only hope.

The operation lasted thirty minutes, but the patient did not at once recover consciousness, and became blue and comatose. Heat, dry cups over the back, the faradaic current, and the hypodermic use of brandy failed to do any good for several hours. The lungs filled with mucus, which there was not power enough to expel, and there seemed at one time scarcely a chance of recovery. Not until twelve hours after the operation did the patient show the least sign of consciousness. About six hours later breathing was fully established, and convalescence thereafter was uninterrupted.

One point of interest was that, notwithstanding the vigorous manipulations resorted to to induce respiration, and the frequent and rather violent movements to which the patient was subjected in the anxiety of her several attendants, not the slightest symptom of peritonitis followed, and the union of the wound was perfect and by first intention.

Case XXII.—This patient was a strong Irish servant girl, who had "never been sick a day in her life" until a year ago, when she began to have scanty menstruation and severe headaches. The flow became less and less. She had an ovarian tumor in the right side. There was nothing peculiar about the operation. A tube was left in for two days for fear of bleeding. Convalescence was uninterrupted, and the patient has been doing hard work ever since she was discharged.

Case XXIII.—An exploratory incision was made in this case to ascertain if it was possible to remove the ovaries and tubes to arrest frequent hæmorrhages, and the discharge of large quantities of offensive pus mixed with blood. The tubes were found to be so firmly attached to the uterus as to seem like a part of that organ. To separate them was impossible. The uterus was large and vascular. A loop of intestine about four inches in length was detached from the tube on the left side. Nothing more could be done, so the wound was closed. Though feeble and emaciated, the patient made a good recovery, and was almost free from a very severe pain from which she had suffered on the left side, whenever the bowels moved. This was attributed to the release of the loop of intestine. In other respects the condition of the patient was not affected by the operation.

Case XXIV.—This was a case of simple, uncomplicated ovariotomy. On the second day there were unmistakable evidences of peritonitis with abdominal distension, which were not controlled by the cold coil. At one o'clock in the morning of the third day the patient was taken from her bed to the operating-room, and the abdominal cavity reopened and washed out with a blood-warm one-per-cent. solution of carbolic acid. A small quantity of bloody serum was found; a tube was left in and irrigation kept up every three hours until the temperature fell to 98·5°. The temperature had been 102°. The tube was removed three days later, and the patient had no further trouble. She was seen in June, 1886, and was perfectly well.

Case XXV.—The pain complained of by this patient was always on the right side. The right ovary was full of cysts, and, with the corresponding tube, was removed. The other ovary was somewhat cystic, but, at the urgent request of the patient and husband that both ovaries should not be sacrificed, unless there was much disease of both, that ovary was left. There has since been a return of pain, but now on the left side, and the ovary is considerably enlarged.

I believe that, as a rule, cystic degeneration is not confined to one ovary, that, once begun, it is progressive, and that it is wiser to remove an ovary that gives evidence of such disease than to let it remain. See Case XXVI.

Case XXVI.—The patient and her husband, being very anxious to have a family, specially requested that both ovaries be not removed, unless there was advanced disease of both. The left ovary, though somewhat cystic, was not interfered with, in the hope that time and care might effect a favorable change. For three months after the operation there was very little pain, but the "same old pain," as she expressed it, gradually returned, and in May, 1886, the patient voluntarily sought relief by a second operation, life having become intolerable.

Had the operation been refused by me, it would have been demanded elsewhere, or the patient would have sought relief in opium. See Case XLIX.

Case XXVIII.—This patient entered hospital with a temperature varying from 102° to 103°, and other evidences of acute peritonitis. There was so much tenderness and distension that a satisfactory examination could not be made, but it was evident that there was a tumor behind and to the right of the uterus. On making an incision, it was found that there was sloughing of the fundus of the uterus. So much hæmorrhage followed the attempt to remove the tumor that an elastic ligature was thrown around the uterus. On the left side were a small ovarian cyst and pyosalpinx, and on the right there was a tumor or cyst, which had ruptured, giving rise to the sudden increase of symptoms of peritonitis, which had made operative interference imperative. There had been a tubal pregnancy, but, as this was not evident until the specimen had been carefully examined, no search was made for the fœtus. The patient died of shock the day following the operation.

Had an operation been resorted to before peritonitis developed, the result would probably have been different, but the condition of the patient on entering hospital was such that an unfavorable prognosis was made from the beginning.

Case XXIX.—This patient (colored) was obliged to give up a good position on account of constant pain. The right tube was over an inch in diameter and distended with pus. It was removed with some difficulty, but the ovary could not be detached from its surroundings, and was therefore left. The drainage-tube was removed in twenty-four hours. Six months later the patient was well, and had been working steadily since she left the hospital, three weeks after the operation.

Case XXX.—There was a suspicion of pregnancy in this case, on the part of her friends, as she had menstruated only once in six months. Severe and constant pain in the right side was complained of. Examination revealed a mass on the right side. This proved to be the distended tube and a cirrhotic ovary. There were no adhesions. Recovery was speedy, but some pain persisted for three months.

Case XXXI.—There was in this case great emaciation with a shattered nervous system. Physical pain and mental worry had rendered the condition the worst possible one to sustain any kind of surgical operation. Had the disease been recognized earlier, the case would have presented no unusual difficulties. The pulse before the operation was at times hardly perceptible; no proper nourishment was taken, and the patient had come to rely to a great extent on morphine. An ovarian tumor as large as a hen's egg was found on the left side, firmly adherent to the uterus. The right ovary was cirrhotic and the tube diseased. Both were removed. In removing the tumor in the right side, some vessels were torn and the ligatures would not hold. A long forceps was applied and left in the wound till the third day. A glass drainage-tube was left in also. The sutures were removed on the ninth day, and union was perfect. The patient was unable to retain nourishment, either by mouth or rectum, and an uncontrollable dysentery set in on the ninth day. Death from exhaustion occurred on the tenth day.

Case XXXII.—There was in this case a large parovarian cyst, very firmly adherent, and there was also marked disease of both ovaries, which contained a number of cysts of various sizes and very little healthy tissue. The cyst was emptied and removed, with some difficulty, and both ovaries and tubes were also removed. A tube was left in the region that had been occupied by the cyst. The usual antiseptic precautions were observed in this case with more than usual rigor, and the surroundings were all that could be desired. The patient rallied well after the operation; but there was a sudden development of peritonitis of the ungovernable type, and, notwithstanding the prompt application of the cold coil, large doses of antipyrine, etc., the temperature continued to rise till it reached 107°, and death occurred on the third day.

Case XXXIV.—The operation was undertaken as a last resort, all other means of relieving the patient having utterly failed. There was an indistinguishable mass where the uterus and ovaries should be felt. Nothing could be done but to close the wound.

Case XXXV.—In this case, one of multiple uterine fibroid, galvano-puncture had been tried thoroughly, but with little appreciable effect. Several months had been devoted to that treatment, first by Dr. J. N. Freeman, of Brooklyn; afterward by myself after Dr. Freeman's method. As the tumors were increasing rapidly in size, it was decided to do Hegar's operation, if possible. It was found to be impossible, because the ovaries and tubes were firmly adherent to and imbedded in the growth. The entire mass, with the uterus, was, therefore, raised and removed at the junction of the cervix. The pedicle was transfixed and treated externally, the wound being closed above and below it, the peritonæum having been separately stitched to the periphery of the pedicle. The patient made a good recovery.

Case XXXVI.—This case was carefully examined several times by myself and others accustomed to the diagnosis of abdominal tumors, and the only difference of opinion was as to whether it was a fibroid of the uterus or a fibro-cyst. It proved to be a multilocular ovarian tumor, with a thick wall and colloid contents. The cyst was very tense, and gave on palpation exactly the impression given by a solid mass. General peritonitis followed the operation, notwithstanding the use of the drainage-tube and the cold coil, and the patient died on the seventh day.

Case XXXVII.—There was such absolute fixation of the whole mass that it was not deemed practicable to remove it. One large cyst was emptied and washed out, but no solid portion of the tumor was removed. The patient recovered, and when discharged was feeling better, probably from the diminished size of the mass.

Case XXXVIII.—The feature of chief interest in this case is the fact that the disease of the ovaries was recognized fully a year before the operation, and that it was steadily progressing. All the other remedies for the disease were tried, and the only measure that from the first could have been of any avail was postponed till the patient was exhausted, bloodless, and broken down from hæmorrhage and pain.

Had the operation been done six months earlier, there is a strong probability that the patient would now have been alive and well.

Case XXXIX.—In this case the doubt as to whether the growth was an ovarian or a fibroid tumor was set at rest only by an exploratory incision, which showed the existence of both.

Case XLII.—Partial relief was afforded to severe intestinal pain by the loosening up of about five inches of intestine. The ovaries and tubes were so matted together by old inflammation that they could not be removed.

Case XLV.—Both ovaries and tubes were removed. The right ovary was markedly cystic; the left less so. The patient was relieved at once of severe pain, and, two months after the operation, was able to do some work for her own support.

Case XLVI.—Athough there were firm adhesions in this case, there was no hæmorrhage after sponging thoroughly, and therefore no drainage-tube was used. The pain, which was more than usual for so small a tumor, was probably due to the adhesions, as the mass was bound down deep in the pelvis, and was increasing in size.

Case XLVII.—This patient had been practically bed-ridden for a year, and had suffered much before that time, having had repeated attacks of pelvic cellulitis. She attributed her first attack to an attempt made to straighten and dilate the uterine canal for the relief of dysmenorrhœa. Six months before the operation, when she first came under observation, there was a mass on the right of the uterus, giving obscure fluctuation, and evidently fixed, as was the uterus. The patient had intense pain before each period, a rather profuse flow, with partial relief, and afterward a constant discharge of highly offensive pus, sometimes amounting to six or eight ounces in the twenty-four hours. There was extreme prostration. The operation was undertaken as a last resort. It was found on making the incision that removal of the tumor would be absolutely impossible. The upper side presented a convex aspect and the wall was apparently not thicker than thin paper. This ruptured during examination. The cavity was thoroughly cleansed, and the inner wall of the dilated tube was sponged out. A Sims drainage-tube was left in and the irrigation kept up at short intervals. Peritonitis developed and proved fatal on the third day.

In this case an early operation, six months or a year before, when the patient was in a much better physical condition, would have afforded a better chance of recovery. The question of puncturing the tube or abscess through the vagina was often considered, but it did not seem practicable, and, as there was a free discharge of pus *via* the uterine canal, was not particularly necessary. As the operation proved, it would have been very difficult to reach the tube by a vaginal incision, and a long wound would have been exposed to infection by the offensive discharge.

Case XLVIII.—This case was very like Case XVI. A portion of the cyst wall only could be removed. That which remained was drained. The abdominal cavity was carefully closed and the walls of the tumor were secured in the wound. The patient made an excellent recovery. On June 15th there was only a small sinus, about two inches deep, remaining, and it was gradually filling up.

Case XLIX.—See Case XXVI. The patient, only two weeks after the operation, felt herself entirely relieved from a certain pain that she had experienced for months before. It is of course much too early to form any opinion as to what the ultimate result will be.

Case L.—This patient might have recovered had not bronchitis set in. The operation was longer than usual, in consequence of the attempt to close the uterine pedicle by the intraperitoneal method. A wedge-shaped portion was removed and the edges were accurately adjusted by two sets of sutures, deep and superficial. On relaxing the ligature, there was so much hæmorrhage that it was necessary, though other efforts were made to control it, to reapply the elastic ligature and secure the pedicle outside, transfixing it with long needles in the usual way. The post-mortem showed some peritonitis, bronchitis, and hypostatic pneumonia in the lower portion of both lungs.

FIFTY CASES OF ABDOMINAL SECTION.—(*Second Series.*)

No.	Whole No.	Date.	Place.	Age.	Married or Single.	Length of incision.	Weight of tumor.	Character of tumor.	Adhesions.	Indications for operation.	Pedicle.	Drainage-tube.	Result.	REMARKS.
						In.	Lbs							
1	51	Feb. 26, 1885.	Woman's Hospital.	25	M.	3	..	Multilocular ovarian cyst and double pyosalpinx.	Very firm and extensive.	Pain & hæmorrhage.	Tied with silk.	Tube 2d day.	Death.	Right tube distended with fœtid pus, but removed intact. Patient much reduced by previous hæmorrhages.
2	52	Feb. 27, 1885.	"	26	M.	3	4	Multilocular ovarian cyst.	Slight.	Pain, peritonitis.	"	None.	Recovery.	Pedicle twisted five times. Hæmorrhage into cyst. Peritonitis at time of operation.
3	53	Mch. 15, 1885.	"	28	M.	3½	..	Hæmatosalpinx.	Firm.	Pain & hæmorrhage.	"	"	"	Removed left tube and ovary.
4	54	Mch. 23, 1885.	"	51	M.	6½	12	Sarcoma of ovary, semi-solid.	Very firm and general.	Pain, rapid growth of tumor, failing health.	"	"	Death 20 hrs. after operation of shock.	Severe hæmorrhage from vessels in adhesions, which gave way in the forceps.
5	55	April 12, 1885.	Private case.	24	S.	2	..	Cystic ovaries.	None.	Pain and failing health, dysmenorrhœa.	"	"	Died Apr. 22d, of peritonitis.	Operation remarkably easy. Much suffering after operation, and nausea, but temp'ture not high at any time. Pulse failed suddenly on 22d, and patient died in collapse eight hours later.
6	56	April 13, 1885.	St. Elizabeth's Hospital.	32	M.	3	..	Cystic ovaries & pyosalpinx.	Very firm.	Dysmenorrhœa.	"	Tube.	Recovery.	The tube was removed April 20th. No bad symptoms. Temperature never above 100½°. Both ovaries and tubes were removed.
7	57	April 18, 1885.	Private case.	20	S.	4	..	Cystic ovaries.	None.	Severe and increasing dysmenorrhœa.	"	"	"	Severe hæmorrhage during operation from tearing of left broad ligament. Peritonitis followed, and irrigation was very thoroughly employed.
8	58	April 20, 1885.	Woman's Hospital.	23	M.	3	..	Double pyosalpinx and both ovaries cystic.	Firm and vascular.	Dysmenorrhœa.	"	"	"	Severe hæmorrhage during operation from torn adhesions.
9	59	April 21, 1885.	"	57	M.	4	17	Multilocular ovarian cyst.	Firm parietal.	Increasing size of tumor.	"	None.	Death May 3d.	Not a single bad symptom up to April 28th, when diarrhœa and dysentery began. Died of exhaustion.
10	60	April 26, 1885.	St. Elizabeth's Hospital.	52	M.	3	..	Right tube and ovary.	Intest. adherent to parietes, etc.	Intense pain.	"	"	Recovery.	The patient had operation in 1883. Left ovary and 4 inches of the intestine removed.
11	61	May 5, 1885.	Woman's Hospital.	26	S.	2½	..	Cystic ovaries.	None.	Pain and failing health.	"	"	"	Had menstruated three times only in last two years. One year after operation, much better, and improved physically. Not free from pain.
12	62	May 15, 1885.	"	42	M.	6	11½	Multiple fibroid.	"	Pain & hæmorrhage.	Left outside	Tube.	"	The wound was closed up to the pedicle, which was first cauterized and later treated with iodoform.
13	63	May 28, 1885.	"	30	M.	4	..	Uterus removed at cervix.	Int'stines to uterus.	Obstinate menorrhagia.	Écraseur & wire.	None.	Death May 30, shock.	Ovaries removed by Dr. Thomas a year before for menorrhagia, but without relief.
14	64	May 30, 1885.	"	34	S.	2½	..	Cystic ovaries.	Firm on right side	Constant pain, dysmenorrhœa.	Tied with silk.	Tube.	Recovery.	Patient had been unable to do her work. In bed with pain much of the time. Excessively nervous and despondent. Much nausea.
15	65	May 30, 1885.	St. Elizabeth's Hospital.	29	M.	2½	..	Both ov'ries (cystic) and tubes.	None.	Epilepsy.	"	None.	"	Epileptic attacks every two or three days, becoming worse. See note.
16	66	June 5, 1885.	"	41	.	5	..	Ovarian. Colloid contents.	Firm and extensive	Size & weight of tumor.	Not reach'd	Tube in cyst.	"	Impossible to remove cyst entirely; part cut off and rest drained.
17	67	June 18, 1886.	Private case.	25	S.	4½	2	Solid tumor of left ovary.	None.	Sense of weight.	Tied with silk.	None.	"	Had been pronounced a fibroid of uterus; proved to be a fibroid tumor of the ovary.
18	68	July 29, 1885.	"	28	M.	2½	..	Cystic left ovary.	None.	Pain & sense of weight.	"	None.	"	Left ovary and tube only removed.
19	69	Sept. 19, 1885.	Woman's Hospital.	42	M.	8	22	Fibro-cyst.	Very firm adhesions	Pain & growth of tumor.	Elastic ligat're	Tube.	Death.	The adhesions were so numerous and firm that hæmorrhage was unavoidable. Death from shock.
20	70	Sept. 30, 1885.	"	38	S.	4	12	Multilocular ovarian cyst	None.	Rapid growth of tumor.	Tied with silk.	None.	"	Peritonitis.
21	71	Oct. 17, 1885.	Private case.	19	S.	2	..	Cystic ovaries.	None.	Epilepsy.	"	"	Recovery	Patient nearly died from effects of ether. No report yet as to the epilepsy.
22	72	Oct. 27, 1885.	St. Elizabeth's Hospital.	32	S.	3	1	Ovarian cyst, right side.	Slight.	Pain.	"	Tube.	"	Tube removed Oct. 30th. Temperature did not exceed 99°.
23	73	Oct. 30, 1885.	Private case.	48	M.	3	..	Pyosalpinx.	Very strong & ext'nsive.	Metrorrhagia and pain.	"	None.	"	Impossible to separate tubes from uterus, which they surrounded. Detached a loop of intestine.
24	74	Nov. 2, 1885.	St. Elizabeth's Hospital.	30	M.	3	4 oz.	Small ovarian cyst, left side.	Moderate	Pain and dysmenorrhœa.	Tied with silk.	Tube on 3d day.	Recovery.	Peritonitis developed on 2d day. On 3d day opened, washed out, and left in tube. Coil used first.

FIFTY CASES OF ABDOMINAL SECTION (*Second Series—continued*).

No.	Whole No.	Date.	Place.	Age.	Married or Single.	Length of incision. In.	Weight of tumor.	Character of tumor.	Adhesions.	Indications for operation.	Pedicle.	Drainage-tube.	Result.	REMARKS.
25	75	Nov. 13, 1885.	St. Elizabeth's Hospital.	32	M.	2½	..	Cystic right ovary.	Firm parietal fr'm old peritonitis.	Pain and dysmenorrhœa.	Tied with silk.	Tube.	Recovery.	Tube removed on 3d day. No unfavorable symptoms.
26	76	Nov. 15, 1885.	Woman's Hospital.	26	M.	2½	..	Ov'ry & tube on right side removed.	Firm on one side.	Pain and dysmenorrhœa.	“	None.	“	The left ovary was somewhat cystic. See Case XLIX.
27	77	Nov. 19, 1885.	“	31	M.	2½	..	Both ovaries cystic.	None.	Pain and dysmenorrhœa.	“	“	“	
28	78	Nov. 24, 1885.	“	28	M.	5½	10 oz.	Tubal pregnancy.	Firm.	Peritonitis.	Elastic lig'ture & wire.	Tube.	Death.	Uterus removed with the tumor. Sloughing of uterus.
29	79	Dec. 8, 1885.	St. Elizabeth's Hospital.	25	M.	2	..	Pyosalpinx, right.	“	Severe pain.	Tied with silk.	“	Recovery.	Did not remove ovary on account of adhesions. Tube full of pus.
30	80	Dec. 11, 1885.	“	35	S.	2	..	Right ovary cirrhotic; ovary & tube removed.	None.	Severe pain in right side, amenorrhœa.	“	None.	“	Had menstruated but once since July.
31	81	Jan. 2, 1886.	“	24	M.	4	4 oz.	Ovarian tumor and pyosalpinx.	Very firm and extensive.	Pain and dysmenorrhœa.	“	Tube.	Death on 10th day.	Right ovary and tube diseased and removed. On left side ovarian tumor firmly adherent to uterus, etc.
32	82	Jan. 11, 1886.	Private case.	28	S.	4	8 oz.	Parovarian and ovarian cysts.	Very firm	Pain and dysmenorrhœa.	“	“	Death 3d day.	Acute general peritonitis.
33	83	Jan. 12, 1886.	St. Elizabeth's Hospital.	28	M.	2	..	Cystic right ovary.	None.	Pain and dysmenorrhœa.	“	“	Recovery.	Right ovary and tube removed. Ovary much diseased.
34	84	Jan. 16, 1886.	Private case.	41	M.	3	...	Chronic ovaritis.	Very firm	Severe pain.	.....	None.	“	The ovaries and uterus were bound together in one mass. Impossible to make any impression on it.
35	85	Jan. 19, 1886.	Woman's Hospital.	30	S.	6	12 lbs.	Uterus and fibroma.	None.	Pain & hæmorrhage.	Elastic ligat're	“	“	Used elastic ligature and transfixed.
36	86	Feb. 8, 1886.	“	36	M.	4	4 lbs.	Multilocular ovarian cyst, colloid.	Slight.	Rapid growth in size.	Tied with silk.	Tube.	Death Feb. 14.	Tumor was diagnosed as fibroid or fibro-cyst by all who examined patient. Punctured the abdomen. Death was from general peritonitis.
37	87	Feb. 12, 1886.	“	42	M.	2½	..	Cysto-sarcoma of ovary?	Firm.	Pain & growth of tumor.	......	“	Recovery.	Not certain before operation whether growth was of uterine or ovarian origin. Removed fluid only.
38	88	Feb. 14, 1886.	“	..	S.	2½	..	Cystic ovaries.	Very firm	Pain.	Tied with silk.	“	Death 5th day.	Died of sheer exhaustion. Very weak before the operation, which was advised six months earlier.
39	89	Feb. 14, 1886.	“	42	M.	2½	..	Sm'll fibroid tumor in right of uter's & cystic ovary.	Too firm to permit removal.	Dysmenorrhœa.	......	None.	Recovery.	Ovarian and fibroid tumors and tube on right side bound in one mass. Impossible to remove it.
40	90	Mch. 1, 1886.	“	27	S.	4	1 lb.	Dermoid cyst on right side.	None.	Constant pain.	Tied with silk.	“	“	Had been suffering five years. Menstruation scanty.
41	91	Mch. 8, 1886.	“	22	M.	2½	..	Cystic ovaries.	Slight.	Pain and dysmenorrhœa.	“	Tube.	“	
42	92	Mch. 27, 1886.	Private case.	32	M.	4	..	Chronic ovaritis.	Very firm	Pain.	.....	“	“	Detached 5 inches of intestine, as in Case XXIII. Removed nothing.
43	93	Apr. 21, 1886.	Woman's Hospital.	25	M.	2½	..	Cystic ov. & diseasd tube on left side.	Slight.	Pain and dysmenorrhœa.	Tied with silk.	None.	Recovery.	Left ovary and tube only removed.
44	94	Apr. 25, 1886.	“	19	S.	2	..	Right ovary cystic, left cirrhotic.	None.	Pain.	“	“	“	Small supplementary ovary on left side. Both ovaries and tubes removed.
45	95	Apr. 25, 1886.	“	19	M.	4	..	Cystic ovary on ri'ht side, pyosalpinx.	Firm.	Pain.	“	“	“	Relief from almost constant pain, which had lasted six months.
46	96	May 3, 1886.	“	30	M.	2½	8 oz.	Ovarian cyst and salpingitis.	“	Pain and sense of fullness.	“	“	“	Ovarian tumor on left side. Cystic ovary on other. Removed both, and tubes.
47	97	May 5, 1886.	Private case.	29	M.	4	..	Pyosalp'x, pelvic abscess.	Very firm	Pain and constant disch'rge of pus.	.....	Tube.	Death 3d day.	Right tube ruptured while attempting to remove it. Impossible to get it out.
48	98	May 12, 1886.	Woman's Hospital.	48	M.	4½	..	Ovarian tumor.	“	Increasing size of tumor.	.....	Tube in cyst.	Recovery.	Case like No. 16. Removed about two thirds of cyst. Drained the rest.
49	99	May 31, 1886.	“	26	M.	2½	..	Ovaritis.	Slight.	Pain.	Tied with silk.	None.	“	Right ovary and tube removed Nov. 15, 1885. Left ovary and tube removed at this operation.
50	100	June 3, 1886.	“	47	M.	6½	2 lbs.	Fibroid and uterus.	Extensive.	Pain and menorrhagia.	Elastic lig. & needles	......	Death.	Bronchitis developed early, and the lungs acted badly. Some peritonitis.

IMPRESSIONS OF
GERMAN AND ENGLISH GYNÆCOLOGY
FROM THE
STANDPOINT OF A WOMAN'S HOSPITAL ALUMNUS.

By J. DUNCAN EMMET, M. D.

(*Concluded from page 183.*)

As I have already hinted, gynæcology in England has lately attempted to emancipate itself from the secondary position it has hitherto held to obstetrics—and in this attempt has been partially successful, though at the cost of much bitterness, heart-burnings, and angry words. The most active and decided apostles of this advanced movement are Bantock and that greatest of all laparotomists, Tait. These men and a number of others with them have boldly seceded from the society of obstetricians and proclaimed themselves and their specialty worthy of separate recognition. The quarrel has other elements and side issues, in which mutual cause for offense has doubtless been given; with the merits of this subject as a whole we here have certainly nothing to do, but in the one essential principle for which these seceders have fought, that gynæcology is a specialty important enough to take its stand side by side with obstetrics, ophthalmology, or any other branch of the science of medicine, the Alumni of the Woman's Hospital must certainly sympathize. Keith, of Edinburgh, and Thornton, of London, both devote themselves, in their hospital work at least, exclusively to gynæcology, but the former has allied himself with neither party on this point, while the latter still holds with the obstetricians.

We all know the necessity for special training in gynæcology and the undeserved disrepute into which several most important gynæcological operations are rapidly falling with a large number of the outside profession through the self-confidence, combined with ignorance, of the men who attempt them. Their bad results are, of course, due to the falseness in principle of the operation. It is not they themselves, but an operation which they attempt without ever having seen it done, that is worthless. I have no doubt that, were my conceit as great, I should attempt at the first opportunity to operate for glaucoma, and I have equally no doubt that, having killed or injured my patient for life, I should vehemently oppose the operation ever after, and abuse its author for having played me such a trick.

We must needs welcome, therefore, the efforts of Englishmen to separate the interests of obstetrics and gynæcology in their country, for it is the only way in which the latter science can advance and truth can be discovered. I have said that these efforts in England were only partially successful. For the men who thus proclaim the dignity of gynæcology are essentially laparotomists, and no professed laparotomist has, it would seem, been able, be it from want of time or inclination, really to advance to any marked degree the wide subject of plastic surgery. Therefore the English, with a few exceptions, are not much better off in respect to the latter than their cousins, the Germans.

I spent about six weeks in London, visiting several times a week the Samaritan Hospital, and here I saw those two men whose names we have all heard so often, Bantock and Thornton. I will not attempt to describe in detail the surgical procedures of any English surgeons, for every one here is familiar with their work from their books. I will confine myself to noticing in a general way the dexterity and skill of some of them, the means they use in little things to insure success, and some marked peculiarities of ideas in which they disagree among themselves and with laparotomists in this country.

I consider the weeks I spent in London as among the most profitable that I spent in Europe. I saw at the Samaritan Hospital Bantock and Thornton remove fibroids and ovarian cysts. I followed their patients after each operation until the sutures were removed. I saw patient after patient in the service of each recover without a temperature over a hundred and with a perfect line of primary union. So far as I could see, their results were equally good. There is also not much to choose between them in the matter of skill; they are both fine operators. Yet, strangely enough, each ascribes his especial success to absolutely contradictory causes. Thornton believes in the specific effect of consistent Listerism; Bantock believes the use of carbolic acid or corrosive sublimate absolutely deleterious to the patient, and uses water directly from the main.

Thornton never allows the spray to leave the abdominal wound for a moment, and devotes minute attention to the washings of the surface of the abdomen previous to operation, to those of the sponges, and to the antiseptic dressings. Bantock uses, as I have said, water from the faucet for all purposes, and uses no antiseptic drug. But they both practice one thing in common—and that is *exceeding cleanliness.*

The Samaritan Hospital is old and small, and was formerly a dwelling-house, with water-closets opening directly into the wards, and without any of the modern improvements in plumbing and ventilation. It is also in a thickly settled portion of London and directly on the street. In view of all this, their success would appear marvelous. According to generally accepted theories in this country, they should never have a case of primary union. They do have this result, however, not as the exception, but as the general rule, as Tait has in his town house in Birmingham, under almost as unfavorable conditions.

Bantock never gives his patients opium, even on the first night after operation, and told me that, if they submitted quietly to do without it then, they rarely asked for it afterward, and that he believed they did much better without it.

Both he and Thornton consider the vomiting consequent upon administration of ether during the operation as severely weakening to the patient, provocative of secondary hæmorrhage, and directly increasing the effect of shock. They both use chloroform and profess to have little nausea, and very little, if any, vomiting following its use. It was a pleasure to observe the neat line of apposition with which each closed an abdominal wound.

Tait is by all odds the nearest to perfection of any laparotomist whom I have ever seen. He at once impresses one as a man at home in his work. He does an immense number of operations. He operates rapidly, yet never misses a detail. I do not think that any one to-day will deny that Tait has the best results of any laparotomist, living or dead, however much many people may smile at his statistics. It is, indeed, of no use to chuckle with suppressed mirth whenever the name of Tait and good results are mentioned in the same breath, as I have so often seen happen in England. I certainly am not prejudiced in favor of anything foreign. I firmly believe that in gynæcology, as a whole, all the world might come to America and begin the subject over again with enormous advantage to themselves; nor are we wanting in great and most skillful laparotomists, yet I pronounce Tait to be an unqualifiedly great man and one to whom laparotomists owe a debt which can never be too loudly proclaimed.

Tait as a plastic surgeon I will not discuss, first, because I saw only so much plastic work of his as is involved in closing abdominal wounds and the excision of breasts (though this would be sufficient to form an opinion upon), and, secondly, because I feel that he can afford to rest upon his merits as a laparotomist alone. I shall offer no apology for describing somewhat minutely his method of operating and the adjuncts thereto.

He has on an average six to eight cases every week in Birmingham, all the year round, and he performs operations, besides, all the way from Edinburgh to London, and east and west in all directions.

Tait laughs at specific antiseptic precautions, but his avoidance of all septic contact is perfect. He inspects his instruments himself before each operation, and thus knows that they are clean. He then puts them in clean water, counts out and inspects his own sponges, and places them in water within his reach. In all his operations he observes three great points—no one shall touch an instrument, no one shall touch a sponge, and no one shall approach the abdominal cavity but himself. He is, therefore, the operator, assistant, and nurse all in one. And in this fact, and that he insists upon absolute cleanliness, lies, I believe, the cause of his success being greater than that of any other man.

He has an assistant who stands on the other side of his operating-table, it is true, but, if the latter's mission is other than one of ornamentation, I failed to discover what it was or even could be.

You are all familiar with the Staffordshire knot, and you have all heard how Tait will tear up with fingers and nails an adhering ovary or tube during the time that most other men would be deliberating upon the advisability of closing up the abdominal cavity without operating.

Tait removes both appendages at once, and considers that the removal of one only for dysmenorrhœa leaves the patient worse than at first.

As the form of the disease in which the tubes are involved is due to the recurring catamenial pelvic congestion, the functional life of the genital organs must be stopped completely or the patient can not be cured.

He taps a cyst while the patient lies on her back, by means of a trocar furnished with stops and connected with a long rubber tube whose other end lies in a receptacle under the operating-table. And thus are avoided the cumbersome method—which must also increase the shock—of turning the patient upon her side and back again, soiling of the patient's body and the table, and the danger of fluid entering the peritoneal cavity. If an abscess breaks, or any other septic fluid enters the abdominal cavity, Tait flushes the latter thoroughly with water, washes the intestines with his hand, and draws the water off, now, if necessary, turning the patient upon her side. Then he takes care to sponge the cavity and its contents quite dry. He seldom puts more than two sutures in the abdominal wound. In the case of an abscess, or when, owing to adhesions, or the sloughing character of a removed tumor, hæmorrhage from its bed is apprehended, he applies thoroughly subsulphate of iron in powder to the dangerous spot and puts in a drainage-tube. It was a wonderful thing to me to see the impunity with which he handled the peritonæum. I do not mean by this that he ever unnecessarily touched or exposed it. On the contrary, I have already said that he was a thoroughly considerate operator. But I never saw him hesitate at any operative procedure for fear of retaliation on the part of the peritonæum. He had no fear of peritonitis, because he had no reason to expect it except under extraordinary conditions.

I shall always remember one conversation with Tait and the lesson it taught me. I incidentally mentioned the term "chronic cellulitis." "Oh," he bluntly remarked, "I don't believe in chronic cellulitis; I have always found diseased tubes in your chronic cellulitis cases, and their removal has been the cure." Upon my expressing some doubt, he asked me to examine a patient whom he was to operate upon the next day. I did so, and found the whole vagina puffed out as though it had been thickly padded, roof and sides as well, the latter œdematous almost to the ostium vaginæ. In the posterior *cul-de-sac* I felt a mass bulging into the vagina as large as a small orange. The slightest touch was painful to the woman, so my examination was not thorough nor extensive, but I did not hesitate to say that she had cellulitis. Tait smiled and said: "I call it pyosalpinx," and a very decided pyosalpinx she proved to have, the ovary being but a shell, and both it and the tube, as well as the surrounding parts, forming one large abscess, though the pus formation had most probably begun in the tubes. At the same time I do not doubt now, any more than I doubted then, that this patient had also an extensive inflammation of the pelvic cellular tissue, that this latter had probably caused the disease of the tubes by extending to the peritonæum, and that disease of these organs, in their turn, kept up the original disease in the cellular tissue. I have seen so many cases during my service in the Woman's Hospital in which, after careful month-long treatment, that boggy feeling which we associate with subacute and chronic cellulitis has entirely disappeared, leaving only a prolapsed tube or ovary, which could be distinctly felt, enlarged and tender. But, upon some slight imprudence or over-exercise on the patient's part, I have seen the old fullness and œdematous condition of the vagina suddenly return, with all the familiar symptoms of cellulitis.

For I maintain that an ovary or a pyosalpinx fixed behind the uterus can not be the immediate cause of swelling and hardness between the bladder and uterus, nor can a localized peritonitis give these same symptoms at the ostium vaginæ.

Therefore, Tait, when he denies any importance to cellulitis in this connection because he has never found it in the opened abdomen, merely acknowledges that he has not looked for it in the right place, and when he says that, on the contrary, he has always found pyosalpinx when other men have treated for chronic cellulitis, he only shows the extreme frequency of pyosalpinx in connection with long-continued inflammation of the pelvic cellular tissue, and his own great skill as a diagnostician in discovering the complication of pyosalpinx where other men have overlooked it. The great fact, therefore, that I learned from Tait and this one case, in the light of my past experience at the hospital, is this: that in every case of obstinate cellulitis, unamenable to treatment, and of years' or even many months' standing, we should at once suspect salpingitis as an existing complication which has now become a cause, and that, when we have satisfied ourselves of the ineffectiveness of local treatment, laparotomy should be performed.

I had great pleasure in meeting Dr. Keith in Edinburgh, and in being present at several of his operations. The operations which I saw presented no particular difficulties in themselves, but the great dexterity of this famous operator and his skill in manipulation would be at once evident in the simplest case.

I can not leave the subject of Keith without referring to one already intimately connected with him in his hospital work, and who is on the high road to share with the former, at no distant day, his honor and reputation.

Dr. Skene Keith, not yet thirty years of age, has already performed eighty-one laparotomies with but four deaths, and he is also putting into practice, at every opportunity, the ideas he received in plastic work and treatment during his recent visit to this country and to the Woman's Hospital.

And now, in conclusion, I think it a fitting peroration to state what my principal object in visiting Europe was, and how far that object was attained through the impressions I there received. This object was to try and discover why the success of laparotomists in Europe was greater than that to which we can lay claim in this country. In this object I have, I think, succeeded.

Yet the answer to my question does not lie in a nutshell. These causes are four, which I shall now briefly enumerate, and then trespass no longer upon your patience.

1. All laparotomists abroad can afford to choose their own time for operation, and to pick out the patients most fit for operation. This we all know can not, for the present at least, be done at the Woman's Hospital.

Schroeder operated upon but one hundred out of eight hundred fibroids that came to his clinic. Keith told me that the cases of the same disease which he considered fit for operation did not probably average 1 per cent. of all that came to him. Moreover, Keith never opens the abdomen for parovarian cysts. He merely taps, for he believes they never return.

2. The class of females who furnish the bulk of tumors everywhere are much stronger abroad and have much less nervous development than the same class in this country.

3. European laparotomists, generally speaking, avoid, as far as possible, the help of assistants, and look personally after every preparatory detail before operating.

4. Cleanliness, not antiseptical cleanliness, but simple, unadorned cleanliness, minutely and consistently carried out.

ON PAINLESS AND ONLY SLIGHTLY PAINFUL
ULCERATION AND PERFORATION OF THE MEMBRANA TYMPANI,
*PROBABLY OF A TUBERCULAR NATURE.**

By ALBERT H. BUCK, M. D.,
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During the past year I have had under my care three cases, in all of which I have reason to believe that the disease presented to my view was tubercular in its nature. Tuberculosis, I need scarcely remark, is a prolific source of purulent affections of the middle ear. The part which it plays in these cases is well known to aural surgeons, and it would be like bringing coals to Newcastle for me to say anything on this general topic in this place. But the recognition of the earliest stages of tubercular disease of the ear is another matter, and the object of the present brief paper is to call the attention of the members of this society to what seem to me to be the peculiar features by which we may distinguish a tubercular from a simple inflammation of the middle ear.

In all three of the cases referred to above the patients were in fair general health. They were certainly not robust, but nobody would for a moment think of speaking of them as presenting the appearance of delicate health. One of them had been subject to almost constant backache for a few months previously, but the significance of this pain (disease of the spinal vertebræ) was only discovered a short time before she consulted me on account of her ear. So far as I could learn, there was no evidence of present or previous pulmonary disease in any of the cases.

In all three of them tinnitus and a sense of fullness in the ear, together with slight impairment of the hearing, were the first symptoms noticed. In two of the three cases I had repeated opportunities of examining the parts with the mirror and reflected light from the earliest commencement of the disease. In the third case I was not consulted until after the patient discovered that his ear was discharging. Slight redness and infiltration of the upper part of the membrana tympani, chiefly posteriorly, and of the skin covering the bony wall of the canal in the immediate vicinity, were the first changes observed. In the course of several days, in one case, and of a few weeks in the other, the infiltration and congestion spread downward until the entire posterior superior quadrant was involved. Gradually, after the lapse of a few days, this region became convex toward the eye of the observer, as if some semi-fluid material were accumulating on the inner side of the membrana tympani. Finally, without any pain, or with a sense of fullness and discomfort barely amounting to a sense of pain, at the most prominent part of the bulging portion, a perforation established itself, as if by a melting-away process at this spot. From this time forward the disease pursued a somewhat different course in each of the cases. In one of them the redness and infiltration spread rapidly from the posterior superior quadrant to the rest of the membrane. The same thing probably took place in the case which I did not see until after the discharge had been established. In the third case, however—that of the young girl with spinal disease—the redness and infiltration did not spread to the other portions of the drum membrane; but, on the other hand, the upper and posterior portion of the wall of the canal gradually became more markedly congested and infiltrated, as if the bone itself—that part which constitutes the floor of the antrum—were the chief seat of the disease.

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* Read before the American Otological Society, July 20, 1886.

Finally, I will state briefly the subsequent histories of these cases. In the one to which I have last referred the ear gradually improved so far that the only lesions left were a little redness along the upper wall of the bony canal and a scab-like formation covering the site of the perforation. The hearing in this ear was also slightly impaired. In the other two cases the discharge increased in quantity until it became profuse. Then obstructions to the free escape of pus developed, and the patients experienced a great deal of pain. In one of these two cases a sudden hæmorrhage from the lungs announced the development of tubercular processes in that region; in the other, the general health became so wretched that the patient has since been obliged to spend the winter in a milder southern climate.

Conclusions.—I am disposed to consider the following as the distinguishing features of a tubercular inflammation of the middle ear, in its incipient stages: 1, *the tendency to localize itself in the vicinity of the upper and posterior portion of the membrana tympani;* but whether the disease originates in the tympanic mucous membrane, in the fibrous structures of the membrana tympani, or in the bone of the immediate vicinity, I am still unable to determine, although I suspect that in some cases the bone substance is the starting-point of the disease; 2, *the marked insignificance of the pain, or even its entire absence;* and 3 (a point to which I have called attention in a previous publication, but which was observed in only one of the cases here referred to), *the intolerance of any but the simplest and gentlest local remedial measures.*

During the preparation of this article I received the following note from Dr. Clarence J. Blake, of Boston, with permission to publish it if I so desired. It affords me great pleasure to be able, in this unexpected manner, to furnish such strongly corroborative evidence of the correctness of the clinical picture which I have attempted to draw. But Dr. Blake's communication does more than this: it furnishes additional new data which serve to complete the picture, and it suggests an explanation of the preference shown by the disease for the upper region of the tympanic cavity. The communication is as follows:

July 10, 1886.

Dear Doctor: I note title of your paper announced, and am very sorry that I can not be at the meeting in New London.

I have had several cases of purulent inflammation of the middle ear accompanying pulmonary tuberculosis and characterized by the following symptoms:

1. Painless course of the inflammatory and destructive process which occurred in the upper portion of the tympanic cavity, beginning with congestion of the inner end of the external auditory canal and membrane of Shrapnell and circumjacent region, followed within forty-eight hours by œdema of the parts mentioned, ulcerative perforation of the membrane of Shrapnell, rapid sloughing, and free purulent discharge.

2. But two of the cases were examined for bacilli in the discharge from the ear, and in neither case were bacilli found.

A markedly illustrative case was that of a young man, twenty-eight years of age, with decided symptoms of pulmonary tuberculosis of the right lung; previous to my examination he had had a sense of fullness in the right ear, impairment of hearing, and tinnitus aurium, but no pain, and these symptoms had been followed by a profuse purulent discharge, which, on examination, was found to be escaping through a perforation in the membrane of Shrapnell. A week later he complained of a sense of fullness and of impairment of hearing in the left ear, and I was enabled to watch the destructive process above mentioned, which, within four days, resulted in a free purulent discharge from that ear also. From this implication of the left ear also in this characteristic manner I was inclined to give an unfavorable general prognosis, which was confirmed by the rapid sequence of symptoms in the left lung and by the patient's death a few weeks later.

For this, as in similar cases, I think it probable that the initial impulse to the implication of the middle ear, which occurs in the great majority of the cases which have come under my observation in the upper portion of the tympanic cavity primarily, comes from suspense of vaso-motor inhibition, reflexly from the trouble in the lung, in that tract supplied largely by the tympanic branch or branches of the carotid, rather than, as Habermann[*] supposes, primarily from infection from the sputa.

Sincerely yours, Clarence J. Blake.

A CASE OF
PISTOL-SHOT WOUND OF THE ABDOMEN;

ABDOMINAL SECTION, RESECTION OF THE COLON, AND SUTURE OF THE SMALL INTESTINE; DEATH; AUTOPSY.

By W. WOTKYNS SEYMOUR, A. B. (Yale), M. D. (Harvard)
(FORMERLY HOUSE-SURGEON, CITY HOSPITAL, BOSTON),
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I was called to see Charles Tuttle Van Zile, sixteen years of age and of fine physique, at 11.45 p. m., July 4, 1886. The patient was said to have received a wound in the abdomen from a single-barrel breech-loading rifled pistol of 0·32 caliber. Immediately after the shooting, which occurred one hour and a half before I was called, he had vomited and been extremely prostrated. When, however, I first saw him he had so reacted that his color was good, lips red, and his pulse 100 and full. His only complaint was of severe pain down the left sciatic nerve. His legs were extended, but from time to time he slightly flexed the left thigh, as it appeared to ease him. Examination of the abdomen revealed a perforation of about the size of a 0·32 caliber ball two inches above and one inch and a quarter to the left of the umbilicus. The edges of the wound were darkened, and, as shown by the probe, the course was slightly downward and penetrated the abdominal cavity. I explained the gravity of the case, and urged laparotomy, to which I did not obtain immediate assent. I gave one sixth of a grain of morphine subcutaneously. At 8 a. m. the pulse was 120, temperature 102, and respiration 24. He still complained of pain in the left sciatic, also some pain in the right shoulder. The lungs were clear and the liver dullness was marked. The patient had slept well for several hours. There was but little tenderness of the abdomen, and the legs were kept extended most of the time. In view of the rise in temperature and pulse, I strenuously urged abdominal section. At 12.45 P. M., July 5th, the temperature was 101·5°, pulse 120, and respiration 36, but at 1 P. M. the pulse was 130 and "windy." At this hour the operation was begun with the valuable assistance of Dr. Camp, Dr. Morris, and Dr. Gordinier. Ether was used, the belly was washed with a nail-brush and carbolic soap, followed by solution of mercuric bichloride, and an incision was begun three inches below the umbilicus and carried up to it. There was no bleeding from the abdominal walls, but, on opening the peritonæum, about a quart of dark bloody fluid escaped from the wound. With angular scissors the incision was rapidly enlarged by prolonging it to about four inches above the umbilicus. There was still no bleeding from the abdominal walls. Temporary sutures were put in to unite the peritonæum and abdominal walls. The presenting intestines were distended, of a deep brick-red color, and lusterless, their surface was velvety, and in places fresh lymph adhered. I immediately washed out the abdomen with blood-warm water, and continued the washing until the water was perfectly clear. In a moment after I began to search the intestines for wounds a portion of the transverse colon appeared in which there were two ragged wounds admitting the index-finger and looking as if the ball had "key-holed" in its passage directly through the gut midway between the free border and the mesentery. This portion of the intestine was gently lifted out of the abdominal cavity on to a towel previously disinfected and wrung out in hot water, and the abdominal walls were pressed together so as to prevent the further extravasation of fæces into the abdominal cavity. Covering the ends of two long hæmostatic forceps, of Reynders's make, with pure rubber tubing, I used these to clamp the intestine and then syringed out the included gut with clear water and subsequently douched it with bichloride solution (1–3,000). The injury to this portion of the gut was so great that I concluded to resect it, and accordingly removed about two inches and a half of the colon. The ends I joined by the Lembert suture, using antiseptic silk. When the ends were firmly united a couple of bleeding needle-holes were closed by stitching the serous membranes with fine iron-dyed silk. When the clamps were removed and all bleeding was stopped, the bowel was dropped back into the belly after being well douched with boiled water. Further search revealed a couple of wounds in the mesentery of the colon, which were also sutured, and a final search disclosed a nick in the duodenum five inches from the pylorus, from which there was considerable bleeding and through which gas escaped. This wound I closed with three Lembert sutures. No other wounds being found, the belly was thoroughly washed out with warm water and the pelvic cavity sponged. A glass drainage-tube was introduced through the lower end of the abdominal wound into the pelvis; the bullet wound was dilated so as to permit the introduction through it of a short rubber tube, and the abdomen closed with interrupted silk sutures. After thoroughly sponging the abdomen with bichloride solution, a dressing of absorbent cotton was applied to the wound and a sponge wrung out in bichloride solution to the drainage-tube. The operation lasted two hours and fifteen minutes. A rectal injection of brandy, f ℥ j, was given. Reaction was prompt, and at 10 P. M. the temperature was 100·5°, pulse 120, and respiration 28. Color good and skin elastic and warm. Urine was passed voluntarily, and there was very little abdominal pain. There was no discharge from the drainage-tube, and none could be removed by aspiration. At 7 A. M., July 6th, I saw the patient, who had rested well for several hours, but about 5 A. M. had begun to be restless and delirious. His pulse was 120 and full, his color good and skin elastic and warm. Having forgotten my thermometer, I could not take the temperature, but there was no apparent fever. Two hours later I was summoned in haste to the patient, but found that he had suddenly died after a short manifestation of great restlessness. I supposed that death was due to sudden hæmorrhage, from giving way of a ligature or some vessel overlooked in the operation. The autopsy was made for the coroner eight hours later by Dr. Morris and Dr. Gordinier, Dr. Camp and myself being present. On opening the abdomen by an incision parallel and to the right of the operation incision, it was found intact, the belly perfectly dry, the intestines slightly adherent from adhesive peritonitis, and *both the colon and duodenum perfectly united*, as was further shown when the involved portions were submitted to the hydraulic test. No other injuries were found, and the course of the ball could not be traced. There were no retro-peritoneal extravasations, and, although the pain in the left sciatic and in the left thigh on extension when the injury was first received pointed to an injury to the psoas near the left sciatic notch, no trace of the ball could be found.

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[*] "Prager med. Wochenschrift," No. 6, 1885.

What the immediate cause of death was I am at a loss to say. It certainly was not hæmorrhage. Was it peritonitis or late shock? The peritonitis did not seem sufficient, and I am obliged to fall back on shock as the explanation My regrets are that I did not operate when I first saw the patient, but he lived in a basement partially under ground and ill lighted, save when the afternoon sun came through the western windows. I felt that a few hours and sunlight with thorough antiseptic precautions would be worth more to him than a hurried operation by candle-light. All my assistants were obliged, as in all my operations, to use the nail-brush and carbolic soap vigorously upon the hands and forearms and then bathe them in bichloride solution (1–1,000), and no hand touched the intestines or entered the abdomen save my own. All the sponges had been for months specially prepared for abdominal operations. Had I when I first saw the patient been able to operate in the well-lighted accident-room of a metropolitan hospital and with such perfect preparations as are there possible, I think, in view of the autopsical results, the chances of recovery would have been excellent. So convinced am I of the propriety of abdominal section for penetrating wounds of the belly that hereafter I shall operate as soon as possible after all antiseptic preparations are made. In such a wise in the next decade we may perhaps avoid peritonitis and the other evils of these cases as the ovariotomists have in ovariotomy since Baker Brown's day.

A FEW REMARKS UPON THERAPEUTICS.

By JOHN HARRIS JONES, L. R. C. P. EDIN., ETC.,

WILKESBARRE, PA.

THE science of therapeutics has made considerable progress in recent years, but it is doubtful if it has kept pace with other branches of medical learning. Much of our knowledge of drugs is empirical; but this does not make them any more ineffectual in disease, and theories of their action in the organism are constantly changing, yet, withal, we may safely say that the therapeutics of to-day is greatly in advance of that of a few decades ago, and no one will deny that the subject is daily assuming a more scientific aspect. New remedies are constantly being thrown before us. Some of them are worthy of our consideration, and a few are what they are represented to be, but the majority have, owing to the exaggerated and oftentimes erroneous views held by their introducers, a very transient existence. Perhaps it would be just as well for us if, instead of being so fond of roaming through pastures new, we endeavored to form a closer intimacy with those drugs which have received a resting-place in our already plethoric pharmacopœias and to widen their range of application in disease. With this end in view, I venture to submit to your readers the following additional uses of old-time remedies, trusting that they will be as effectual in their hands for the diseases mentioned as they have been in mine:

I. *The inhalation of ether in non-expansion of lung*, due to adhesions of pleural surfaces, occurring after pleurisy with purulent effusion, in apneumatosis of children, and asphyxia neonatorum.

After absorption or artificial evacuation, we frequently find that a long-continued effusion in the pleural sac is followed by destructive changes in the corresponding lung. Many remedies have been tried with the object of expanding the air vesicles and preventing the occurrence of carnification, but with unfavorable results. I suppose the most effectual treatment has been that of breathing compressed or rarefied air. But by far the best method, in my experience, is inhalation of ether. I remember when I first had occasion to use it the area of resonance was increased over two inches, and was maintained after the effect of the anæsthetic had vanished. I have used it since on three other patients with very flattering results, and can confidently recommend it to the profession as the best means of dilating the air-vesicles and restoring the lung to its natural state. If the adhesions have not been of too long standing and are not very dense in structure, they will certainly yield, and, once overcome, will be permanently obliterated. A careful mapping out of the area of dullness should be made prior to administering the anæsthetic, and, if it is found that it is not appreciably diminished after two or three administrations, it will be an indication that re-expansion is hopeless. Often, however, one administration will suffice. It is undesirable to push the anæsthetic to complete narcosis. It should be discontinued after the stage of excitement has been reached. I was induced to resort to ether in preference to chloroform, not only because it was safer, but for the reason that I regarded the former a direct *irritant to the respiratory center*, as witness the convulsive efforts at respiration while a person is under its effects.

Its inhalation is sometimes serviceable in the capillary bronchitis of children, when we suspect that one or more of the smaller bronchi have become impervious. It is true that counter-irritation to the affected area and emetics are frequently successful in overcoming the obstruction; but, when asphyxia seems to be progressive and is accompanied by asthenia, emetics are too depressing, and their action can not be relied upon. I have found the employment of ether quite safe in these cases. Under its use the heart's contractions are strengthened, and a violent anti-respiratory (forced expiratory) action is set up, which frequently is sufficiently powerful to dislodge the offending secretion.

I can also recommend the use of ether in the asphyxia of newly born infants. It will sometimes succeed when artificial respiration fails. A few drops may be placed upon a piece of absorbent cotton and held to the nostrils. A better method is, after the nares have been cleansed of mucus, etc., to insinuate into either nostril a camel's-hair brush previously dipped in ether, and, by titillating its mucous membrane, we, in addition, summon to our assistance the benefit of reflex action.

II. *Bichloride of mercury and tincture of belladonna in membranous croup.*

I have for some years been in the habit of treating this disease with a combination of corrosive sublimate and belladonna. These drugs are recommended for this complaint in almost every work on therapeutics; but I am not aware that they have ever been given conjointly. I have found that small doses of the bichloride (one fiftieth of a grain), administered in conjunction with tincture of belladonna (two to five minims), every half-hour, for a child two years old, is a very successful method of dealing with this dangerous disease of childhood. The secret of its success is in its persistent administration, even when the symptoms are apparently most unfavorable. I have several times witnessed a happy termination to the disease when other practitioners with whom I was associated entertained scarcely a hope of recovery. It is advisable to commence the treatment by administering an emetic, so as to dislodge the already-formed membrane. Probably much of the benefit derived from this mixed treatment is due to belladonna, and it is astonishing what large doses of this drug children can tolerate. During the progress of the disease the strength must be maintained by a liberally nutritious diet and stimulants, for I must say that, when recovery takes place, the patient is left very anæmic and weak. This is not very apparent while the medicine is being given, as every evidence of it is partially masked by the physiological effects of the belladonna.

III. *Belladonna in sterility of females.*

There are few drugs which exhibit so pronounced a predilection to act upon certain structures of the body as belladonna. Among its favorite tissues, those of the female sexual organs may be mentioned. Its employment is followed by more or less benefit in every disease to which these parts are liable. I suppose it has fallen to the lot of almost every practitioner to be consulted by married women who never were pregnant, as to the cause of their barrenness. Apparently, they enjoy the best of health, and have never suffered from any irregularity of the sexual apparatus. To such I have on several occasions prescribed belladonna internally, and have found that, after taking the medicine for some weeks, they became pregnant. I have seen this happen so often that I am constrained to regard the occurrence as something more than accidental. I shall not venture to theorize upon its action, but will merely mention that I have observed that the external genitalia become more relaxed, and the os and cervix uteri somewhat softened and pliable, during the treatment.

Book Notices.

Psychiatry. A Clinical Treatise on Diseases of the Fore-brain, based upon a Study of its Structure, Functions, and Nutrition. By THEODOR MEYNERT, M. D., Professor of Nervous Diseases and Chief of the Psychiatric Clinic in Vienna. Translated (under authority of the author) by B. SACHS, M. D., Instructor in Diseases of the Mind and Nervous System in the New York Polyclinic. Part I. The Anatomy, Physiology, and Chemistry of the Brain. New York and London: G. P. Putnam's Sons, 1885. Pp. ix–285. [Price, $2.75.]

IT is surprising that a man of so high an order of ability at Meynert should be such an obscure and careless writer; and is is still more surprising that the connection between consecutive trains of his thought should so often be a matter of deep puzzle to ordinarily constituted minds. Any one who has read this book in the original will appreciate the difficulties of the task Dr. Sachs has had before him. Careless expressions, a confusing use of technical terms that mean one thing in one collocation and something quite different in another context, abrupt and only faintly logical transitions from one line of ideas to another, are great elements of perplexity in the original, even when the original is read by one to whom the language is native. Dr. Sachs has therefore done an extremely useful thing in making the contents of this book accessible to the English-reading public; for we are quite persuaded that, if our German scholars were polled on this point, there would be but a highly distinguished few who could understand the original. Indeed, we are by no means certain that this translation into entirely intelligible language, even though the tongue is a foreign one, might not be a serviceable glossary to German readers. By this we do not mean to say, however, that the translation is faultless. On the contrary, there are many errors, but they are minor ones, and so petty as not to detract from the general merit of the whole, and they can be very readily corrected in a subsequent edition.

It must not be forgotten that this book is the crowning effort in the life of a man who is universally recognized as the foremost living authority upon brain structure and brain disease. And, in addition, it must not be forgotten that the author was seven years in writing the book. He says: "I have not, and never had, the slightest inclination for making books. To this effort I was impelled by the conviction that there was need of a *scientific* treatise on mental diseases in spite of the present large literature on the subject. The least doubt as to the correctness of any views expounded in this book induced me to stop, and to interrupt work until I had satisfied myself of the correctness of these views by scientific investigation and reflection." And, morever, if one would read the book fairly, it must not be overlooked that the work is, as the translator emphasizes in his preface, much more than an anatomical treatise—it is a treatise on brain diseases, prefaced by a broad-minded although very technical anatomical dissertation.

One is often struck at what is seemingly, on first appearances, the author's dogmatism, for he constantly states his opinions without reference to the contradictory researches of others—indeed, in this respect, the book is often disappointing. But the real reason is that the author proposes, as he states in his preface, to consider dissenting views in the second volume, which is not yet in press. Nevertheless, it is rather tantalizing to have such careful investigations as those of Flechsig and Wernicke minimized in their indubitable importance.

The contents are divided into chapters on the structure and architecture of the brain, the minute anatomy, anatomical corollaries, and physiology of cerebral architecture, the nutrition of the brain, the mechanism of expression, and some uncompleted pages on fore-brain diseases. The illustrations are abundant and well executed. In a notice of this brevity it is impossible to go into detail. We can merely say that those who desire a fundamental knowledge of the subjects treated here can not afford to forego the perusal of this book. It is eminently thoughtful. Here and there one comes across some phrase, semi-epigrammatic, that lights up a subject as only an epigram can. For example, desiring to make clear that the so-called "memories" are devoid of the slightest sensory qualities, the author says: "In our memory of the most glaring sunlight, of the most deafening thunder-clap, there is not so much as the billionth part of the light of a glow-worm or of the sound produced by the falling of a hair upon water."

We shall look forward with great expectation to the appearance of the second volume, when we can treat more justly of the book as a whole, to which the present volume is merely a prelude.

Local Anæsthesia in General Medicine and Surgery, being the Practical Application of the Author's Recent Discoveries. By J. LEONARD CORNING, M. D., formerly Resident Physician to the Hudson River State Hospital for the Insane, etc. New York: D. Appleton & Co., 1886. Pp. 103.

THE reader is already familiar with Dr. Corning's discovery with reference to the prolongation of cocaine anæsthesia in a part by the isolation of its capillary tract from the general circulation, and a sufficient number of cases have been published in the journals to establish beyond a doubt the correctness of his theory, that the temporary action of cocaine is due to the fact that the drug is rapidly absorbed and carried away by the vessels at the point of injection. This little work furnishes most interesting reading. The first three chapters, forming Part I, are historical, dealing respectively with the subjects of cerebral anæsthesia, coca, and cocaine. Part II (pages 34 to 100, inclusive) contains eight chapters, the first of which consists essentially of a paper published by the author in this journal, while the second (Chapter V in order) contains a description of the methods of mapping out the superficial veins, rendering the part bloodless, injecting the drug, and, finally, limiting it to the field of operation by arresting the local circulation. Nine illustrations add to the value of the text. Chapter VI details the various devices for incarcerating the anæsthetic in special cases; there are three cuts of instruments. The three succeeding chapters (pages 54 to 82) contain reports of cases of operations by various surgeons, all of whom were generally successful in their application of Dr. Corning's principle. Chapter X is headed "The Influence of Cocaine upon the Healing of Wounds"; Chapter XI, on "Spinal Anæsthesia and Local Medication of the Cord," contains the results of a series of experiments already published by the author as a journal article. In a brief appendix are additional reports of cases, and a few cautions as to the prevention of constitutional symptoms after injections of cocaine, and the necessity of using pure solutions. A carefully prepared index closes this attractive little monograph, the contents of which reflect the highest credit upon the author.

BOOKS AND PAMPHLETS RECEIVED.

The Refraction and Accommodation of the Eye and their Anomalies. By E. Landolt, M. D., Paris. Translated, under the Author's Supervision, by C. M. Culver, M. A., M. D., etc. With One Hundred and Forty-seven Illustrations. Philadelphia: J. B. Lippincott Company, 1886. Pp. xi–597. [Price, $7.50.]

La psychologie de l'enfant. L'enfant de trois à sept ans. Par Bernard Perez. Paris: Felix Alcan, 1886. Pp. 307.

Proceedings of the Connecticut Medical Society, 1886. Ninety-first Annual Convention, held at New Haven, May 26th and 27th. New Series, Vol. III, No. 3.

Correspondence.

LETTER FROM VIENNA.

The New Professor of Obstetrics and Gynæcology.—The late Professor Auspitz.—The next International Health Congress.—Tuberculosis communicated in the Rite of Circumcision.—Syphilitic Disease of the Ciliary Body.—Pasteur's Method of combating Rabies.

Vienna, *July 21, 1886.*

The second chair of obstetrics and gynæcology at the university having lately become vacant by the resignation of its incumbent, Professor Hofrath Spaeth, on account of ill health, the *Professoren-Collegium* of the medical faculty occupied itself with the nomination to be made to the Minister of Education of a successor to the chair in question and the directorship of the clinic. A committee appointed to consider the matter, consisting of Professors Billroth, Kundrat, Hoffmann, Albert, and Nothnagel, recommended Professor Breisky, of Prague, as the worthiest candidate. The committee's recommendation was accepted by a large majority in the *Professoren-Collegium*, and, as your readers are aware, the nomination of Professor Breisky has been confirmed by the Minister of Education and the Emperor, so that the celebrated gynæcologist of Prague, Professor Hofrath Breisky, is to be the professor and the director of the second clinic of gynæcology and obstetrics at Vienna. I may add that Professor Spaeth had conducted this clinic since 1873, and that he had before been a professor at the Vienna military school called the *Josephinum*, and also professor at the third clinic of obstetrics (the clinic for nurses) at Vienna.

The medical faculty of the university has sustained a heavy loss by the death of the famous syphilographer, Professor Heinrich Auspitz. Auspitz belonged to the celebrated disciples of Hebra, and contributed very much to carrying on the work of his distinguished master. He was born on the 3d of September, 1835, at Nikolsburg, took his medical degree at Vienna in 1855, and was appointed Docent in dermatology and syphilography in 1865. In 1875 the title of extraordinary professor of these two branches was bestowed on him, and in 1884 he became director (*Primarius*) of the second clinic of syphilis in the General Hospital, thus succeeding to the place made vacant by Zeissl's death. Among his most important works I may mention the "Doctrine of the Syphilitic Contagium and its Real Demonstration" (1866), and his "System of Skin Diseases" (1881); and among his less prominent works "The Relation of the Cuticle to the Papillary Layer, especially in Pathological Conditions of the Skin" (1870); "Remarks concerning the Doctrine of the Inoculation of Syphilis" (1870); "On Syphilitic Inoculation" (1871); "On the Absorption of Dissolved Substances through the Epidermis" (1871); "Buboes of the Inguinal Region" (1873); "On Venous Hyperæmia of the Skin" (1874); "On the Mechanical Treatment of Skin Diseases" (1876); "On Excision of the Syphilitic Initial Sclerosis" (1877); "The Anatomy of the Syphilitic Initial Sclerosis" (1877—in conjunction with Unna); "On Lupus Syphiliticus et Scrofulosus" (1878); and many others. Some of these were published in the "Vierteljahresschrift für Dermatologie und Syphilis," which was founded by Pick and himself in 1869.

Auspitz received many marks of distinction on account of his great activity and his high merits. In 1879 he obtained the golden cross for merit, and in 1883 the order of Franz Josef was bestowed on him. In 1882 he became a member of the *Leopoldinisch-Carolinische deutsche Akademie der Wissenschaften.* He was also a member of the Imperial-Royal Society of Physicians of Vienna and of the *Medicinisches Doctoren-Collegium*, of the same city, and a corresponding member of the New York Dermatological Society and the *Société de médecine publique*, of Paris. He died on the 23d of May, of a disease of the heart.

As you are aware, at the last International Health Congress, held at the Hague, Vienna was chosen as the next place of meeting. The Austrian Society of Public Health (*Gesundheitspflege*) took steps accordingly, and, on the 13th of January of this year, convoked a meeting of physicians and technicians, at which it was resolved to postpone the congress to the year 1887, the leaders of the society being charged with the necessary preparations. It was made known at the meeting that Professor Billroth, who had been appointed to the presidency of the congress, had resigned his office. On the 5th of last May a meeting was held of delegates from different corporations, at which, among the measures taken, was the appointment of a committee (*Actions-Comité*) consisting of twenty-five members, charged with the necessary preparations for the congress, and empowered to add to their number.

A very rare and interesting case was related by Professor Hofmokl at a recent meeting of the Imperial-Royal Society of Physicians of Vienna. He referred to an observation which had been made at the last Congress of Surgeons, at Berlin, by Professor von Bergmann, according to which some new-born Jewish children were infected in the rite of circumcision. Professor von Bergmann had drawn attention to the fact that he had observed an epidemic occurrence of tuberculosis of the inguinal glands in new-born Jewish children, and added that it had been made out that the rabbi who had circumcised the children, sucking the blood, had a tuberculous ulcer on his tongue. As a supplement to this observation, Professor Hofmokl presented to the society a child eight months old which had been under his treatment six months before. It had been circumcised, according to the ritual, on the eighth day, and the process of stopping the flow of blood had been performed by the circumciser by taking the penis into his mouth. The wound did not heal, and, seven weeks after the circumcision, a small gray ulcer was to be seen on the dorsum of the penis and on the remnant of the prepuce, accompanied with swelling of the inguinal glands on each side. There were no manifestations of disease in other parts. A dressing of iodoform, with baths and an anti-luetic course of treatment (including the use of iodide of potassium, calomel, corrosive-sublimate baths, mercurial ointment, and so on), was of no avail. The inguinal glands continued to swell, some of them suppurated, and the ulcer grew larger. No tubercle bacilli had been found in the pus, neither were there any symptoms of syphilis. On the day after this demonstration before the society, the child was put under the influence of chloroform, and thirty glands, varying in size from that of a bean to that of a hazel-nut, which had undergone partly a caseous and partly a suppurative process, were removed from the groins, and the ulcer was seared superficially with Paquelin's cautery. The glands that had been removed proved, macroscopically as well as microscopically, to be tuberculous, and tubercle bacilli were found in them by Professor Weichselbaum. Hence the process was a tubercular one, and, as both the mother of the child and its nurse were healthy, it could be suggested with a certain degree of plausibility that the case belonged to the class to which Professor von Bergmann had called attention at the Berlin congress.

At another meeting of the same society Professor Fuchs showed an interesting case of syphilitic lesion in the ciliary body. The patient contracted syphilis toward the close of February of the current year, the sclerosis being situated in the sulcus coronarius, and a month afterward he had a rash. The left eye had been now much reddened for fourteen days, and there were to be observed extensive swelling of the glands and a large macular syphilide. There was marked ciliary injection of the left eye, with precipitates on the cornea, and the pupil had lost its round form. Between the iris and the sclera there was a tumor, of a reddish-yellow color, which was very vascular; in the deep part of the eye there was a prominence, the anterior part of which had a reddish-yellow color, the posterior part being brown; there were, besides, turbidity of the vitreous and hyperæmia of the retina. Professor Fuchs remarked that the swelling had surely developed from the ciliary body and was of syphilitic origin. He added that, taking into consideration the short duration of the syphilitic affection and the presence of papules on the body, he was inclined to compare this tumor to the papules and condylomata of the skin. The lens was transparent; the tumor had formed for itself, as it were, a bed in the lens, and had destroyed it in one place, as was seen in cases of sarcomatous growths within the eye.

Inoculations against rabies have, so to speak, obtained their right of citizenship in Vienna as well as in Paris, through Professor von Frisch and Dr. Ullmann. These gentlemen had betaken themselves to M. Pasteur's laboratory at Paris for a close study of the methods made use of by the latter investigator in his anti-rabic inoculations. First, Professor von Frisch made a communication on his own researches respecting this subject to the Imperial-Royal Society of Physicians, which was received with much applause by the audience, and the same was the case with the last communication before the same society, by Dr. Ullmann, an operator at Professor Albert's clinic. The latter remarked, in the course of his speech, that, in order to disprove the suggestion that rabies might possibly be produced by the preventive inoculations, he and four other physicians had inoculated themselves with the rabic virus derived from mad dogs, though they had not been bitten by such—without bad consequences. The injections caused no pain. On the first and second days he had felt somewhat weak, and, beginning with the sixth inoculation, he had noticed on himself an infiltration of a slight degree, with severe itching. He further stated that he had brought with him from M. Pasteur's laboratory a rabbit of the one hundred and fourteenth remove (*passage*), which had been inoculated with rabic virus, and that, with M. Pasteur's consent, he was prepared to make preservative inoculations on persons who had been bitten by mad dogs, at Professor Albert's clinic. At the same meeting Professor von Frisch showed three rabbits which had been inoculated with parts of the spinal cord taken from rabid animals. He had already inoculated a large series of animals after Pasteur's method, and had always observed the same appearances: From eleven to fifteen days after the trephining and the injection of the rabic virus, the animals remained quite healthy; afterward they ceased to eat, and turned on their sides in the cage, presenting the appearance of general paralysis. On being touched with a stick, however, they were very sensitive and were immediately seized with cramps and contractures; four or five days later they died. At the post-mortem examinations he had never observed an abscess of the brain; the cerebral wound healed without any reaction. He had now received from M. Pasteur's laboratory a rabbit inoculated with the *virus fixe*, and announced that he would begin his researches concerning the attenuation of the virus.

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AMERICAN FOOD IN THE FRENCH MARKET.

A dispatch to the "New York Times," dated Paris, August 14th, concludes as follows: "France is also much alarmed at the popular spread of American fresh fruit and canned articles, which are now household necessities, and it is predicted that in a few years peaches, pears, and apples will be undersold here, to the ruin of the home market."

A like gloomy outlook from the economical point of view has before now been met by the French with a flank movement in the guise of measures taken in the interest of sanitation, as those of our readers who recall the crusade against American pork, under the pretense that it was *par excellence* the habitat of the *Trichina spiralis*, do not need to be reminded. On that occasion, certain members of the medical profession in France followed a course that was looked upon here as a prostitution of science to the demands of trade. It is possible that this sort of warfare on American food-products is to be waged again, for in a recent number of the "Union médicale" we find a *feuilleton* that seems to have no other *raison d'être.* "Beware of canned lobster" (*prenez-garde aux conserves de homard*), says one of the head-lines, and the part of the article to which that caption belongs goes on to picture the horrors of the canning business as conducted in this country. No serious answer to such writing is called for; the American people are large consumers as well as producers of canned articles of food, and "the proof of the pudding is in the eating" is an old saw of which they fully realize the force in this instance, in spite of what alarmists choose to say. No doubt we have our fair share of falsifiers, as well as of other scoundrels, in America, and an occasional European, if he is exceptionally stupid, may be led to look upon the United States as hell's kitchen. That writers who so picture it are not very successful, however, in impressing their views upon their respective communities seems to be a legitimate deduction from such a state of things as is revealed in the "Times's" dispatch. The canning, or "tinning," of articles of food is undoubtedly a business in which the necessity exists of taking certain precautions to insure sound and wholesome products—precautions that necessarily involve an expenditure of time, which means money. The danger, therefore, lies in the temptation, due to over-competition, to cheapen the product at the expense of its quality. If, however, unscrupulous cupidity is confined to this part of the world, the fact has not yet been demonstrated; the ordinary laws of trade may be relied on to regulate the conduct of producers who have any business standing, and sanitary officials have data enough to guide them in seizing and destroying the wares that may from time to time be put upon the market by men who have no good name to lose and nothing but the immediate future to look forward to.

As to the *feuilletoniste* in question, his accuracy may be judged of by his quoting from an article on the dangers of kissing, which he says was published in this journal, but of which we have no recollection and which we are unable to find in its columns; his idea of what the readers of a medical *feuilleton* expect to have served up to them may be gathered from another of his head-lines, "*Le catafalque de Grant entre les mains de Barnum*," in which he gravely parades an absurd rumor that the Governor of the State of New York, having said to some showmen that he had no authority to sell them the Grant catafalque used at Albany, suggested that their prospect of getting possession of the New York catafalque might be better; and his conception of the relation between maudlin sentimentality and the duty of a community in dealing with criminals is well illustrated in his horror at the hanging of a man in Indiana who had killed his wife and then attempted to kill himself by cutting his throat—the horror being based on the fact that "*le malheureux*" had to wear a tracheotomy-tube to the scaffold, a circumstance that, in his opinion, seemed to call for the intervention of the pardoning power. Carrying out his ridiculous impression that kissing is one of our national weaknesses, he closes his plaintive account of the Indiana execution with this rueful exclamation: "*Dire que c'est dans un pays où l'on s'embrasse tant qu'on assiste à de pareilles atrocités!*"

The whole article is a tirade against things American, and it fitly concludes as follows: "Finally, you see that there will be no lack of attractions for Europeans who are willing to go to the United States in 1887, for the International Medical Congress at Washington." Notwithstanding "Simplissime's" assurances (for so our *feuilletoniste* signs himself), we must caution our prospective European visitors not to count too confidently on seeing a hangman's rope drive a tracheotomy-tube into a man's cervical vertebræ, for that touching spectacle can not be got up at short notice. However, we can assure "Simplissime" that, if he comes, he will be looked upon as specially exempt from the kissing process.

PERLÉCHE; A DISEASE SUPPOSED TO BE NEW.

M. Justin Lemaistre, a professor at the *École de médecine* at Limoges, describes a contagious affection occurring among school-children in some country districts in France, which he thinks has never before been described, although the peasants have known it for some time under the name of *perléche.* It is of comparatively frequent occurrence in the country districts of Limousin. It appears at the angles of the mouth as a small abrasion, which in a short time extends along the labial commissures, forming cracks, or fissures, which give rise to pain and some hæmorrhage when the mouth is opened wide. The lesion has many of the objective characters of certain mucous patches and commissural rhagades in syphilitic children. The malady is a simple one, without constitutional disturbance, and usually lasts from fifteen to thirty days.

Lemaistre has frequently examined the exudation on the patches with the microscope, and unhesitatingly pronounces th affection due to a schizomycetous parasite of the globular grou of bacteria. He has successfully cultivated the microbe according to the most recent methods. In addition to the spheroida bacteria, he has detected in the cultivation product numerou long chaplets, or streptococci, having the power of very rapi multiplication. To the latter he has given the name *Strept coccus plicatilis.* Following up this line of investigation, h examined the drinking water used at the different schools i the district. In one of the schools the disease was first notice in a child who lived at some distance. The water supply a this child's home came from a fountain which was found t contain streptococci in abundance. Under cultivation, thes microbes behaved exactly like those from the patches on th affected children. The spread of the disease among the children at the school was now easily explained. The pupil wh lived at a distance had deposited on the common drinkin utensil some of the germs swarming in his labial folds, which he had obtained from the water he drank at home, and thus infected the rest of the children, who had to drink from the sam utensil. Out of 5,500 children attending the thirty-two primary schools of Limoges, examined by the author, 312 (1 in 17 were affected with *perléche.* The treatment, like the disease, i simple; merely touching the patches with sulphate of coppe or alum is quite sufficient to insure a cure.

The foregoing is particularly interesting to those who pay any attention to school hygiene, and forcibly illustrates the evi of allowing a number of children to make use of the same cup or mug. Any question as to whether the author's assertion that the *Streptococcus plicatilis* is the cause of the disease, and that the affection has not before been known to the profession will stand criticism and does not detract from the weight of his argument that school hygiene is sadly neglected in France—may we not add in America also? As to the first assertion, we fully concur in a suggestion made in a recent number of the "Progrès médical," that the author could have settled the point by inoculating one of the unaffected children with the cultivated microbes, and, considering the mildness of the affection, he would have been fully justified in doing so. Bearing in mind the numerous bacteria of various forms that find a lodgment on the healthy mucous membrane of the mouth, we must hesitate before imputing special pathogenetic properties to any individual form.

The stomatitis described by Bergeron, in 1855, as occurring in an epidemic form among soldiers, as the result of over-crowding and contagion, seems to have been much severer than *perléche.* It was attended with some febrile reaction, and the local changes first appeared on the gums, from which they extended to the labial commissures. We know the predilection herpes has for the commissures, and how in a short time the little vesicles burst, run together, and form painful fissures in these situations; and for the contagiousness of some forms of herpes there is no lack of authority. Vogel does not even consider it essential for its propagation that any of the affected persons should have suffered from herpes originally, thus implying that it may arise from mere dirtiness. While not asserting that *perlèche* and herpes labialis at the commissures are identical, we think their similarity close enough to call for further investigation before accepting M. Lemaistre's proposed addition to nosology.

A PHYSICIAN'S PERSECUTION OF A PHARMACIST.

Under the heading "The 'Profession' and the 'Trade'"—a caption the irony of which seems to have been well deserved by the particular member of the "profession" concerned—the "British and Colonial Druggist" publishes a letter from an apothecary doing business in one of the suburbs of London, in which the writer very temperately sets forth the abominable treatment he has been subjected to by a medical practitioner. The physician was a new-comer, and the apothecary had taken pains to recommend him to some of his best customers, several of whom soon began to bring prescriptions given them by the doctor. One day a lady—one of the persons who had employed the doctor on the apothecary's recommendation—brought a prescription of his calling for what the apothecary saw at once was a dangerous proportion of solution of morphine hydrochloride—*i. e.*, six fluidounces in a mixture amounting in all to not quite nineteen fluidounces, the dose ordered being a fluidounce every three hours. The British *liquor morphinæ hydrochloratis* contains four grains of the morphine salt in each fluidounce, so that each dose of the mixture, had it been prepared as it was ordered, would have contained more than a grain of morphine.

Obviously, the apothecary was right in supposing that a very grave error had been committed, apparently, he inferred, by a slip of the pen. Having told the messenger to call again, he sent an assistant to the doctor with a note, inclosing the prescription, on which was written "Liq. morph. hydroch., ℥ vj," to which he called the doctor's attention. "On his return," says the apothecary, "my assistant seemed puzzled about the matter. He said that, the doctor being with a patient, the note had been sent in to him, and that after some little time he came out with the prescription, and said, 'What's all this about? There is some mention of a mistake in a prescription. I can't, however, see anything wrong; be good enough to have it dispensed at once.' Not being able to make anything out of the assistant's narrative, I took out the prescription again, but, on examining it, I saw to my surprise that the line in question read: 'Liq. morph. hydroch., ʒ iv,' or four drachms of the solution in place of six ounces, the other items remaining as before. I applied a lens to the writing, but no erasure of any kind had been made. At once I saw what the doctor had done. *He had substituted a new prescription* on precisely similar paper, and folded up and creased just as the old one had been."

Had the doctor been content with this cowardly little piece of meanness, probably the public would never have heard of the matter, but he has since sent his patients to other pharmacies, and the aggrieved apothecary feels suspicious that he has dropped some hint among his patients about a mistake having been made in the reading of a prescription at his place. We fear that he is correct in his surmise, and we are heartily ashamed that any man could be found within the ranks of the medical profession so inconceivably mean as to repay kindnesses by such a contemptible course.

MINOR PARAGRAPHS.

AMERICAN REPRESENTATION IN THE ANTWERP CONGRESS.

We have received a letter from Dr. James G. Kiernan, of Chicago, in which he criticises a suggestion made by Dr. E. N. Brush, published in our issue for July 24th, that the proper body from which to draw our representatives, or some of them, at the Antwerp Congress was the Association of Superintendents of American Institutions for the Insane. Dr. Kiernan raises objections to certain members of the association, and he objects in general terms that membership in the association "depends entirely on being chosen to what is a political medical position in New York, Ohio, Kansas, Virginia, and most of the States except those of New England, Illinois, Iowa, California, Minnesota, Alabama, and Georgia, by laymen." Nevertheless, it still seems to us, the association contains among its members a number of gentlemen who could adequately represent American psychiatry at the congress, although perhaps they have no wish to serve in that capacity.

ITEMS, ETC.

Infectious Diseases in New York.—We are indebted to the Sanitary Bureau of the Fourth Division of the Health Department for the following statement of cases and deaths reported during the two weeks ending August 17, 1886:

DISEASES.	Week ending Aug. 10.		Week ending Aug. 17.	
	Cases.	Deaths.	Cases.	Deaths.
Typhus	1	1	0	0
Typhoid fever	17	4	27	5
Scarlet fever	17	2	8	5
Cerebro-spinal meningitis	3	3	4	4
Measles	53	9	38	9
Diphtheria	40	19	57	24

The New State Board of Health of Massachusetts is constituted by Dr. Henry P. Walcott, Dr. Elijah U. Jones, Mr. Julius H. Appleton, Mr. Thornton K. Lothrop, Dr. Frank W. Draper, Mr. Hiram F. Mills, and Mr. James White. We understand that one of the medical members, Dr. Jones, is a homœopathist. Dr. Samuel W. Abbott is the board's secretary.

Professional Incomes.—Dr. R. S. Harnden, of Waverly, N. Y., whose letter describing an epidemic prevalent in that section is published in this issue of the Journal, has written to us also as follows: "I notice a little item in the last number of the Journal on 'Incomes of Practitioners in Canada.' I will venture to assert that that one small item will do the profession more good than a dozen of the longest articles you ever published. There is too much of this mentioning the exaggerations of professional incomes. If our journals and the press generally would give the public the inside facts about us, we should not stand in the false light we do with the public, and our bills would be paid more promptly. So many would not then be discouraged on account of their comparatively insignificant incomes."

Honors to Medical Men in the United Kingdom.—The "Lancet" announces the knighting of Mr. John Tomes, Dr. Douglas Maclagan, Dr. B. W. Foster, Surgeon-General Thomas Longmore, Dr. Edward Sieveking, and Mr. William Stokes, the latter of Dublin; and, in addition, that Dr. George Watt and

Dr. John W. Tyler have been made companions of the Order of the Indian Empire.

Dr. J. Leonard Corning.—We learn that, on Friday evening, the 6th inst., a complimentary reception was given to Dr. Corning by Dr. W. W. Newton at Pittsfield, Mass., at which the local profession was largely represented. The affair is said to have passed off very pleasantly.

The Ninth International Medical Congress.—The "Lancet" mentions a number of well-known British medical men who entertain the intention of going to the Washington Congress, including Mr. John Simon, Dr. B. W. Richardson, Dr. Thudichum, Sir James Paget, Sir Andrew Clark, Sir Spencer Wells, Professor John Chiene, Professor Fraser, and Sir William Turner, and adds: "It is not America alone that is interested in the success of the meeting at Washington, but the profession throughout the whole world, and we might add the world itself. When our profession meets internationally it is of good omen. We not only stimulate fraternity and scientific rivalry among ourselves, but every thought in advance and every medical discovery is a great boon for the human race and for all nations. We urge on members of our profession in the empire to strain a point to be at Washington on or before September, 1887, where, if report is to be trusted, a very hospitable reception awaits them."

Army Intelligence.—*Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from August 8, 1886, to August 14, 1886:*

Sternberg, George M., Major and Surgeon. Granted leave of absence for fifteen days. S. O. 186, A. G. O., August 12, 1886.

Wolverton, William D., Major and Surgeon. Granted one month's leave of absence, to commence on or about August 15, 1886. S. O. 104, Division of the Atlantic, August 7, 1886.

Adair, George W., Captain and Assistant Surgeon. Ordered for duty as post surgeon, Fort Brady, Mich. S. O. 103, Division of the Atlantic, August 6, 1886.

Gandy, Charles M., First Lieutenant and Assistant Surgeon. Granted leave of absence for one month, with permission to apply for one month's extension. S. O. 103, Division of the Atlantic, August 6, 1886.

Loring, Leonard Y., Captain and Assistant Surgeon. Granted leave of absence for one month, on surgeon's certificate of disability, with permission to apply for an extension of two months. S. O. 59, Division of the Pacific, August 2, 1886.

Merrill, James C., Captain and Assistant Surgeon. Assigned to duty as post surgeon at Fort Klamath, Oregon. S. O. 130, Department of the Columbia, July 30, 1886.

Benham, Robert B., Captain and Assistant Surgeon. Relieved from temporary duty at Fort Omaha, Neb., and ordered to Fort Bridger, Wyoming. S. O. 97, Department of the Platte, August 5, 1886.

Hopkins, W. E., First Lieutenant and Assistant Surgeon. Ordered from Fort Lowell, Arizona Territory, to Angel Island, Cal., for duty as post surgeon. S. O. 61, Division of the Pacific, August 6, 1886.

Naval Intelligence.—*Official List of Changes in the Medical Corps of the United States Navy for the two weeks ending August 14, 1886.*

Rush, Charles D., Passed Assistant Surgeon. Detached from the receiving ship Franklin and ordered to the U. S. S. Pinta.

Willson, W. G. G., Passed Assistant Surgeon. Detached from the U. S. S. Pinta and ordered home to wait orders.

Walton, Thomas C., Surgeon. To remain on present duty until September 1, 1887.

White, C. H., Surgeon. To remain on present duty until August 21, 1887.

Rush, C. W., Passed Assistant Surgeon. Authorized to delay ten days, under orders to Sitka, Alaska.

Lumsden, G. P., Passed Assistant Surgeon. Ordered to hospital, Mare Island, California.

Baldwin, L. B., Passed Assistant Surgeon. Ordered to the U. S. Steamer Ranger.

Neilson, J. L., Surgeon. Detached from the U. S. Steamer Ranger, to proceed home and wait orders.

Society Meetings for the Coming Week:

Monday, *August 23d:* Boston Society for Medical Improvement.

Wednesday, *August 25th:* American Dermatological Association (first day—Greenwich, Conn.); Medical Society of the County of Albany; Auburn, N. Y., City Medical Association; Berkshire, Mass., District Medical Society.

Thursday, *August 26th:* American Dermatological Association (second day); Cumberland, Me., County Medical Society.

Friday, *August 27th:* American Dermatological Association (third day).

OBITUARY NOTES.

Robert Kerr Colville, M. D., of Brooklyn, died on Thursday of last week, at the age of seventy-six. He was a native of Scotland, and came to this country in 1832. In 1842 he took his medical degree from the Medical Department of the University of the City of New York, and eleven years afterward he obtained the diploma of the Royal College of Surgeons of Edinburgh. After two years' further stay in Edinburgh he returned to the United States, and had since practiced in Brooklyn.

George Herbert Hope, M. D., a recent graduate of the Long Island College Hospital, died at the hospital, of which he was a member of the house staff, on Wednesday of this week, of typhoid fever. He was twenty-five years old.

Letters to the Editor.

AN EPIDEMIC IN TIOGA AND GREENE COUNTIES.

Waverly, N. Y., *August 14, 1886.*

To the Editor of the New York Medical Journal:

Sir: During the past two months an epidemic has prevailed in this valley (at Waverly, Sayre, and Athens) which so far as I can learn, is unique and somewhat peculiar. I have thought best to call attention to it, and will briefly describe the same. Without any prodromes, and in most cases with startling suddenness, the patients, old and young, are seized with a severe cramping, cutting pain, in most cases under the short ribs of the right, but in some in the same location on the left side, the respiration becoming in some exceedingly short and so embarrassed as to produce marked cyanosis. There seems to be no trouble with the lungs, liver, stomach, or pleura; no cough, chills, or vomiting. The temperature in some cases is normal, in some increased to 102°–103·5° F., but soon falling to normal. The pain is easily controlled by sedatives or anodynes, and the embarrassment of respiration relieved upon the subsidence of the pain. These are the characteristic symptoms in most cases; in a few, however, there are erratic pains extending through the shoulders, head, and intercostal spaces, and occasionally the bowels and lower extremities. While suffering an attack myself I came to the conclusion that the trouble originated in the phrenic nerve and only affected the diaphragm, but, as I have never heard of diaphragmatic neuralgia of an epidemic character, or rather prevailing as an epidemic, I am, with my brother practitioners of this valley, at a loss what to call it. I think upward of one thousand have thus far been taken with it in the places named. None have died, and most have recovered in two or three days, some sooner. In about one fourth of the cases there is sometimes a relapse after one, two, three, or four days. Occasionally two or three relapses occur. In one case which I saw (that of a physician who neglected himself as to treatment) there was considerable vesicular trouble in the lower lobe of the lung, with some indication of pleuritic roughening, but he had caught cold from taking off a wrapper, and I could not say positively that this condition resulted from the former trouble. People coming here from other localities and from the hills about us are attacked suddenly. There seems to be considerable prostration, which continues in many patients for several days after the pain has subsided. The pulse is often 120 to 140, the respiration 40 to 60. Cyanosis is quite marked in the more severe attacks, and in some there is a cold clammy sweat. I have only noted the latter in two cases.

Now, what in the name of Æsculapius is it?

Respectfully,
R. S. Harnden, M. D.

Proceedings of Societies.

NEW YORK ACADEMY OF MEDICINE.

Meeting of June 17, 1886.

The Vice-President, Dr. Charles Carroll Lee, in the Chair.

Alexander's Operation.—Dr. W. M. Polk read a paper on the operation of shortening the round ligaments, structures which under ordinary circumstances were considered too trivial to afford much support to the uterus. What he should present was the outcome of his own work, unbiased by the work and opinions of others. The degree of strength possessed by the round ligaments had been shown by the experiments of Dr. J. Williston Wright, made at the request of the author. One ligament broke only when the suspended weight reached five pounds; another when the weight had reached four pounds and three quarters. The portion of ligament tested was the outer extremity, the smallest and consequently the weakest portion of the cord. Before breaking, both ligaments had stretched to about twice their normal length, but the stretching did not begin until the weight reached in one instance two pounds and three quarters, and in the other three pounds. Remembering how far short of three pounds the uterus weighed, the fact would be plain that the round ligament was easily capable of supporting that organ after Alexander's operation. The effect of traction upon both round ligaments was to lift the fundus of the uterus upward and to draw it forward until it reached the symphysis pubis. If traction were made upon only one ligament, the fundus would be drawn to one side and upward until it rested upon the pelvic brim about the pectineal eminence. If it were desired to lift the uterus well up and forward, as in procidentia, this procedure could be relied upon. To make the organ rotate on its transverse axis, and lift it slightly, traction upon the round ligaments could be resorted to. A question of interest was, What would happen if pregnancy took place after the operation? Would the uterus be able to rise in the abdomen? One of his patients was now six months advanced, but, with the exception of a slight dragging pain in the pelvis, he had not been able to detect anything abnormal in the case. The uterus could be easily felt through the abdominal walls, which was a rare condition in pregnancy under ordinary circumstances. Alexander had reported some cases in which women had gone to term without accident.

The cases to which the operation was applicable were those of retroversion and retroflexion of the uterus without adhesion to adjacent viscera, those of prolapsus of the uterus, and those of prolapsus of the ovaries. No patient should be operated upon who could be relieved with a pessary; also none in whom the uterus was firmly fixed in the hollow of the sacrum. The operation was called for in every case of prolapsus of the uterus. He did not regard it alone as sufficient for the relief of procidentia uteri; in connection with it the perinæum should be repaired and the vagina narrowed. Speaking of the operation itself, it might naturally be inferred that some vesical disturbance would follow it, but such had not been the case in any of his cases. He also called attention to the fact that those who had operated only upon the dead subject would find that the operation was more difficult than when performed upon the living subject. If properly performed, it was a simple procedure—as simple as sewing up a lacerated cervix. No more preparatory treatment was necessary than for any other surgical operation. The patient was better for having the bowels moved, for a general bath, as well as for shaving over the pubes and washing with soap and water. Ether being required, there should be the usual abstinence from food. The entire operation should be as carefully performed as if it were intended to open the peritoneal cavity. The observance of strict antisepsis would prevent suppuration and the formation of sinuses. The operator need trouble himself about no other guide than the spine of the pubes. Having found that he could cut boldly through the tissues, the objective point being the external inguinal ring, the fibers of the external oblique muscle were glistening and different in appearance from anything with which they were associated. Having isolated the external ring, the round ligament would be found in a mass of fat and blood-vessels, probably moving up and down with the respiratory movements of the perinæum. Putting his finger upon it, the operator would find that it sank into the external ring. He now made traction with a hæmostatic forceps, drawing out the fat and blood-vessels, when the round ligament appeared and presented its distinct structure. The cord was grasped with a second hæmostatic forceps and dragged out, disconnecting it from its attachment to the peritonæum and the walls of the ring. The uterus was now placed in its proper position with the sound preferably; if it could not thus be done, then by the fingers of an assistant introduced into the rectum. The operator should carefully cleanse his hands after introducing them into the vagina before returning to the operation wound. Equal traction should be made upon the two ligaments until they held the uterus in its normal position. The ligaments were then stitched by at least three or four sutures of the largest-sized and strongest catgut to the upper face of the pubic bone and to the external ring. He introduced a bone drainage-tube, especially if there was much adipose tissue. The outer wound was closed with silk, usually not more than three or four sutures being required. The wound was then covered with a Lister dressing, and strict antisepsis was observed throughout. The external wound need seldom be more than two inches in length, but he would not hesitate to carry it up to the internal ring if he could not find the round ligament without. He had never felt that there was any special danger connected with the operation. He had never noticed any induration at subsequent examinations. The patient was kept abed four weeks after the operation. In some cases he tamponed the vagina with cotton to retain the uterus in position, in some he used a pessary, in others the entire support was left to the round ligaments from the first; and all had done well. In two or three cases the relief had not been such as he had hoped for, but those patients had been among the first operated upon, and really the adhesions found would now be regarded as contra-indicating the operation.

Dr. James B. Hunter regarded Alexander's operation as upon trial, and argument was not worth much unless backed by considerable clinical experience. There was no question but that the operation had a future; there were certain cases in which it was suitable. He had operated on three patients, and had examined them very recently and found the uterus in each instance firmly moored behind the pubes. No one would attempt to perform the operation in a case in which there were adhesions to any considerable extent. It seemed to him that in cases in which there was retroversion of the uterus with prolapsus of the ovary, and a pessary was not tolerated, the operation possessed advantages over any other procedure. The only question was, then, whether it was safe, and Dr. Polk's experience went far toward answering this question. Nevertheless, the speaker thought there was some risk of peritonitis. He had been somewhat surprised in experimenting upon the cadaver to find that in some instances the peritonæum could be drawn out through the abdominal ring by traction upon the round ligament. This had been explained on the supposition of adhesions, but, if it could happen in the dead subject, it might also happen in the living subject. He thought the operation was more dangerous than that for laceration of the cervix, but he did not think it was more difficult. He had inserted a pessary, and kept the patient upon her back four weeks after the operation.

Dr. W. T. Lusk said he had had very little experience in the performance of the operation. He had been so far chiefly an observer, having been somewhat skeptical at first, but not so skeptical that he could not be convinced of its value. He had seen it performed by Dr. Polk several times, and he now rose to say that he was a complete convert. He believed it was destined to do a great deal of good for working women. He believed it was only moderately difficult, and with proper precautions should not be attended by any serious danger. He had looked over the cases in which accidents had occurred, and it seemed to him that they were just such accidents as might occur in the simplest operations. The operation, then, was not difficult, and it was safe: Was it possible to do all that was accomplished by it with pessaries? He thought we could say positively no. Pessaries were good things for the rich, who could lie on a sofa, ride in a carriage, and have nurses and servants to do their work; but they were not in many instances sufficient for the working classes. The only question with regard to which he was in doubt was whether by changing the axis of the uterus we might not involve the woman in trouble at confinement. A sufficient number of cases had not been observed to settle this question conclusively.

Dr. H. J. Boldt had operated on the cadaver only, and had had some difficulty in finding the round ligaments. It would be interesting to know what had been the result some time after delivery in the cases of pregnancy subsequent to the operation.

The Chairman had operated upon three patients in private practice by Alexander's method. In one case the operation was performed in October last, in another in February, and in the third about four months ago. In all, the results were ultimately good; the uterus retained its improved position. In one an abscess formed. In each case there was simply retroversion or retroflexion with such tenderness that the patient was unable to wear a pessary. He thought, in common with Dr. Hunter and Dr. Lusk, that the operation had a great future in the class of cases so well described and limited by Dr. Polk.

NEW YORK PATHOLOGICAL SOCIETY.

Meeting of June 9, 1886.

Dr. John C. Peters in the Chair.

Dilated Oviducts and Cystic Ovaries.—Specimens, which had been removed by the usual method, were presented by Dr. W. Gill Wylie for a candidate.

Fatty Emboli in the Lungs.—Dr. Frank Ferguson presented for microscopical examination sections of fatty emboli, large areas of which had existed in the lungs of a man who had died from injuries sustained by a fall. The lungs appeared to the unaided eye extremely anæmic; the capillary vessels were completely occluded by the fat. Fatty emboli were also found in the kidneys. In reply to a question, Dr. Ferguson said he had prepared the sections in the fresh state, cutting them with Valentin's knife.

Tait's Operation.—Dr. Wylie presented a number of specimens of Fallopian tubes and ovaries that had been removed from different patients during the past year. He said that he had operated in twenty-eight cases since a year ago, at which time he had reported twenty-five cases. Two of the twenty-eight patients had died; the others had recovered. In the two fatal cases there had been severe complications. Fully one half of the twenty-eight had been well-marked cases of pyosalpinx in different stages. In many the tubes had been distended with pus; in many others with a thin coffee-colored fluid, which he was convinced was due to a degeneration of the lining membrane of the tubes, giving rise to slight hæmorrhages. In nearly all of the cases the end of the tube had been occluded and the ovaries cystic. He was of the opinion that any disease which would cause occlusion of the tubes would lead within a short time—a year or two at most—to cystic degeneration of the ovaries. He did not refer to the cysts which some pathologists spoke of as the result of an unruptured corpus luteum, but to cysts from actual degeneration. They varied in size from that of a pea to that of an orange. Cystic degeneration of the ovaries without marked disease of the tubes was almost always associated with hysterical symptoms. In one of the specimens presented there was fibroid degeneration of the ovaries.

Dr. R. W. Amidon asked what had been the effect of the operation upon the hysterical symptoms.

Dr. Wylie replied that with but one exception it had been satisfactory. Although nervous symptoms might remain a few months after the operation, he had yet to see a case in which, when it was done early, a cure had not followed.

Dr. M. Putnam Jacobi asked whether, in a case of hystero-epilepsy without objective symptoms of disease of the ovaries, he would remove those organs.

Dr. Wylie replied that he would not do so ordinarily. In special cases he would not hesitate from subjective symptoms to open the abdomen and examine the ovaries. If they were cystic, he would remove them.

Dr. Jacobi thought it strange that Charcot, in the report of his large experience, had not referred in a single instance to disease of the ovaries as the cause of the hystero-epilepsy.

Medullary Carcinoma of the Ovary with secondary deposits.—Dr. E. M. Cushier presented specimens that had been removed from the body of a German woman, aged twenty-six years, the mother of three children. Four months prior to her death she had noticed an enlargement of the abdomen. Her previous health had been good. The tumor, which was to the left of the median line, had been painful; the patient had a cachectic appearance. Some days before death she had a convulsion, and afterward she had remained in a state of partial stupor. Subsequently there was left external strabismus, followed by dilatation of the pupil. The right eye appeared normal. There was albumin in the urine at the later examinations, but none when the patient entered the infirmary. The autopsy revealed a large tumor in the left side of the abdomen, but it had developed from the right ovary. It had the microscopical appearances of a medullary carcinoma. The adhesions were firm and extensive. There were two small nodules in the kidneys, with one of considerable size in the liver, and the lungs were studded with them. The brain showed changes which would be described by Dr. Jacobi. So far as the speaker's examination had extended, the appearances of a medullary cancer were present only in the ovarian tumor, but she desired a further examination to be made by the committee on microscopy.

Carcinomatous Tumors of the Brain; Cerebral Hæmorrhage.—Dr. Jacobi presented the brain from the patient the history of whose case had just been narrated by Dr. Cushier. The largest tumor was situated in the second and third temporal convolutions of the left hemisphere. So far as was observable, however, the patient's speech had not been affected. There was also a small tumor in the anterior convolutions of the same hemisphere, and likewise one in the occipital region of the right hemisphere. The convulsion seemed to have been due not to the presence of these tumors, but to a hæmorrhage in the right peduncle, encroaching upon the caudate nucleus. The speaker was unable to explain the eye symptoms from the lesions found. It had been her impression that the albumin had appeared in the urine only after the convulsion, and that albuminuria was not the cause of the convulsion.

Dr. Cushier was not positive whether the house physician had said the urine contained albumin before or not until after the convulsion.

Dr. Amidon said that the temporal lesion was situated where one would expect it to affect the speech, and the patient's tendency to be reticent might be accounted for in that way.

Dermoid Cyst of the Ovary.—Dr. E. N. Liell presented a large dermoid tumor of the ovary removed by Dr. H. Marion-Sims from a woman sixty-nine years of age. She had borne three children; the menopause had occurred twenty years ago. Her health had always been good until March last, when she noticed an enlargement of the abdomen and suffered some from pain. The enlargement had increased and the patient had consulted a physician in Baltimore, who had sent her to Dr. Sims. The tumor, when removed, together with the fluid, weighed about sixty pounds. Two bones of considerable size and bloody granular material were contained within it. The operation had been performed on the day of the meeting.

Reports on the Progress of Medicine.

OBSTETRICS.

By HENRY C. COE, M.D., M.R.C.S.

The Early Diagnosis of Pregnancy by Means of the Sound.—Massarenti ("Rivista clinica," Jan., 1886) has for several years practiced successfully a novel method of determining the existence of pregnancy during the early weeks. Having on several occasions passed a sound into a gravid uterus without the occurrence of any unpleasant results, he determined to utilize for diagnostic purposes a procedure which is commonly regarded as most reprehensible. He uses a flexible wax bougie about four millimetres in diameter; this is introduced to the fundus uteri and the depth of the cavity is carefully noted. He has recognized the existence of pregnancy as early as the sixth week.

Piscidia Erythrina in Obstetrics.—Lessona ("Gazzetta delle cliniche," Feb., 1885) reports upward of one hundred cases in which he administered this drug, either in threatening abortion or during the first stage of labor. Prompt relief of excessive pain was experienced in 71 per cent. of the cases. For the sake of comparison, opium was given to ninety-six other patients, with a similar result in 70 per cent. of the number.

The Application of Forceps to the After-coming Head.—Lomer ("Ztschr. f. Geburtsh. u. Gynäk.," xxii, 1886) reports three cases, out of one hundred and twenty-nine extractions, in which he found it necessary to extract the head by means of forceps. He deprecates a resort to this measure except on the part of experienced *accoucheurs*, and criticises severely the statistics of Freudenberg, of Cologne, who applied the forceps in 34 per cent. of his cases of extraction.

Immediate Extraction after Version.—Winter (*Ibid.*) after a careful study of this subject, based upon upward of three hundred cases arrives at the following conclusions: 1. The erroneous teaching with regard to the advisability of not extracting promptly after version arises from the common notion that the conditions present after version has been effected are the same as in spontaneous footling presentations. 2. The true cause of the fœtal mortality after rupture of the membranes is not merely the premature escape of the amniotic fluid, but the violent contractions (often tetanic) of the uterus. Every effort should be made to deliver before this condition of tetanus occurs. 3. In simple cases of immediate extraction the prognosis for the infant is very good. 4. When, for any reason, the version is precipitate, the child's life is imperiled unless extraction is effected without delay; pressure on the cord, premature detachment of the placenta, and the entrance of air into the uterus are the common causes of the death of the fœtus. 5. If the membranes are intact, extract immediately after turning; if they have ruptured, wait until the cervix is sufficiently dilated, then extract promptly after performing version. 6. *Rapid version* should only be performed under special indications, and solely in the interests of the mother.

Cocaine in Obstetrics.—Jeannel ("Nouvelles arch. d'obstétrique et de gynéc.," April, 1886), after reviewing the literature, details the results of his experiments conducted at the *Maternité de l'Hôtel-Dieu*, in which he sought to discover to what extent local applications of cocaine to the cervix uteri relieved the pains of the first stage of labor. He mentions incidentally the fact that the alkaloid is rendered inert by the presence of a solution of corrosive sublimate, so that it is necessary to refrain from the use of antiseptic injections before applying the cocaine. The *technique* of the operation was quite simple. It consisted simply in applying to the cervix during the period of dilatation tampons soaked in a five-per-cent. solution of hydrochlorate of cocaine. The patients selected for the experiments were young, hyperæsthetic women, in whom it was fair to assume that the pains would be of more than ordinary severity. The writer affirms that his results in six carefully observed cases only confirmed the previous conclusions of M. Doléris, viz.: The true seat of pain during the stage of dilatation is probably the lower uterine segment. This pain is due to distension of the segment, and consequent stretching of the nerves of the cervix and vaginal vault. It may be relieved to a remarkable degree by applying anæsthetic solutions to the points in question. The pain experienced at a later stage is to be ascribed to pressure on the sacral nerves; this can not be relieved by local means. The sharp pain experienced just before and during the expulsion of the head from the vulva is capable of relief by cocaine applications. In concluding this highly interesting paper, M. Jeannel calls attention to the fact that a solution having a strength of five per cent. is to be preferred to that of twelve per cent., which was used by Dr. Dabbs, who published four cases in which he had obtained the most satisfactory results from the employment of local anæsthesia during the first stage of labor in primiparæ ("Brit. Med. Journal," Sept. 5, 1885). The cervix may be exposed through a speculum at the beginning of the labor, while the *accoucheur* swabs the cervical and mucous membrane freely with cotton dipped in the anæsthetic solution, and finally leaves one or more tampons *in situ*. It is sometimes necessary to make several applications before the primary effects are obtained; fresh applications are necessary at intervals during the course of the labor.

The Preservation of the Perinæum during the Expulsion of the Head.—Doléris (*Ibid.*), at the conclusion of a paper with this title, summarizes as follows: 1. In order to prevent the occurrence of an extensive laceration, beginning at the sphincter vaginæ, from too rapid expulsion of the head, hold the latter back for at least half an hour, not with rough, forcible pressure, but gently and intelligently, during the pains. 2. To avoid the commencing tear in the fourchette, at a point which might readily escape the eye, watch the anterior fontanelle, and, just as soon as one half the latter has emerged, resort to rectal expression, as described by Olshausen and Ahlfeld. The latter consists simply in introducing two fingers into the rectum, placing them upon the child's chin and making gentle traction forward and upward toward the symphysis. The other hand at the same time assists in the extension of the head. 3. If, from extreme anxiety on the part of the accoucheur, lest a rupture may be imminent, or from circumstances which render immediate delivery desirable, it seems necessary to perform episiotomy, the incision should be made laterally, should be confined to the vaginal sphincter, and should be effected just at the expiration of a pain, while the parts are still tense.

The Amount of Pressure exercised upon the Fœtal Head by the Forceps during Traction.—Marins Rey ("Archives de tocologie," January, 1886) has made a scientific study of this subject, his deductions being as follows: The pressure upon the fœtal head consists of three factors: (1) The "active" compression made by the hand of the accoucheur, while locking the handles; (2) the "traction-compression," exercised by the forceps as the result of traction; (3) the "passive" compression, effected by the pelvic walls. During the act of traction the pressure, as expressed mathematically, is directly proportional to the resistance offered by the head, and inversely as the friction and extent of the surfaces in contact. The power exerted by the hand of the accoucheur is inversely as the cosine of the angle between the blades, directly as the breadth and inversely as the length of the handles. The practical corollary is this—that it is desirable to increase the extent of the surfaces which are in direct contact with the fœtal head; the ideal forceps should have short, parallel blades, and long handles.

Delay in Tying the Cord.—Von Engel ("Ctrlbl. f. Gynäk.," No. 46, 1885) writes in favor of delaying ligation of the umbilical cord, for the following reasons: 1. The placental circulation does not cease for some little time (even as long as a quarter of an hour) after the expulsion of the fœtus; if the cord is tied at once, the child is deprived of an appreciable amount of blood, which is retained within the placenta and cord. This is proved beyond question by weighing the infant before and after the cessation of the placental circulation; the average gain is ten grammes. 2. Contrary to the commonly received theory, the fœtal circulation is not favored by the first respiratory efforts, but is rather retarded. The contraction of the child's heart is the sole propelling force. 3. The arrest of the placental circulation is due to the contraction of the vessels of the cord and placenta, the arteries being the first to contract. 4. These two forces, the cardiac action and the vascular contraction, are directly opposed, the amount of blood supplied to the fœtus being proportioned to the preponderance of one force over the other. 5. Clinically, the mortality during the first ten days among infants whose cords were ligated immediately after delivery was 18 per cent., while after delayed ligation it was only 9·45 per cent.

The Uterine Bruit after Delivery.—Andreiew contributes a lengthy article with this title to the "Archives de tocologie" for April, 1886. The following are his principal deductions, based on a series of careful clinical observations: 1. There is a marked difference in character, force, and intensity between the uterine bruit before and after delivery; the latter is soft and intermittent. 2. There is no case in which the post-partum bruit can not be heard on careful and repeated auscultation. 3. It is heard at almost the same spot before and after delivery, oftenest on the left side of the uterus. 4. The loudness of the souffle is directly proportioned to the force of the uterine contractions; the stronger the contractions, the feebler the sound. 5. There is no connection between the site of the bruit and either the inclination of the uterus in a certain direction or the location of the placental attachment. 6. The persistence of the murmur after delivery varies with the condition of the patient, the average time being fifty-seven hours. 7. The presence of a uterine souffle is not to be regarded as an evidence of pregnancy, since it is heard in certain morbid conditions. A murmur heard over a fibroid tumor points to an excessive development of its blood-vessels; it is oftenest observed in the case of interstitial growths.

Clinical Observations on the Third Stage of Labor.—Roemer ("Arch. f. Gynäk.," xxviii, 2) publishes a series of observations conducted with the view of determining the average time after the birth of the child at which the placenta is expelled. From a study of between seven and eight hundred cases he decides: 1. The later the period at which the membranes are ruptured, the earlier is the separation of the placenta. 2. The placenta is detached sooner if the bag of waters has been ruptured artificially. A further series of observations led Roemer to infer: 1. The after-birth comes away in the majority of cases after the lapse of an hour, with expectant treatment. 2. The later the rupture of the membranes, the shorter the third stage of labor. 3. If the membranes are not ruptured until just before the expulsion of the head, the third stage will usually be completed in less than an hour. To summarize: The separation of the placenta is effected by the pains of the first stage, therefore the longer the membranes remain intact, the sooner the placenta is expelled. Roemer next considers the management of the third stage of labor, with special reference to Credé's method. He decides in favor of the latter, preferring to employ expression after waiting from a quarter to half an hour, rather than to allow two or three hours to pass before attempting to remove the placenta.

The Ætiology of Ischuria in Lying-in Women.—Schwarz ("Ztschr. f. Geburtsh. u. Gynäk.," xii, 1) has studied this question carefully at the bedside, and arrives at the following conclusions: The bladder is not emptied by the contraction of its own muscular coat, but by the influence of intra-abdominal pressure on the distended viscus. This pressure is increased both by posture and by contraction of the abdominal muscles. As a corollary to this, it may be added that when the intra-abdominal pressure becomes greatly diminished and can not be augmented (as in women after delivery, whose abdominal walls are flabby and relaxed), the bladder can not be evacuated. The author admits that long pressure on the urethra, temporary paralysis of the sphincter vesicæ, etc., may be a cause of ischury, but in most cases the reason is to be sought in the want of power in the abdominal walls. Consequently inability to empty the bladder is to be referred to the same source in patients after laparotomy, after the removal of ascitic fluid, and after labor.

The Nature and Cause of Internal Rotation.—Dr. D. Berry Hart read a scholarly paper on this subject at a recent meeting of the Edinburgh Obstetrical Society ("Ed. Med. Jour.," May, 1886). His deductions are stated under three heads, which he calls the "law of internal rotation"—viz.: 1. That portion of the fœtal head or trunk which first encounters a lateral part of the sacral segment [of the pelvic floor] is rotated forward in a direction opposite to the portion of the segment encountered. 2. No part of the child is ever directed at once into the sacral excavation. "Posterior rotation" is a bad term, since the occiput does not rotate into the hollow of the sacrum, but executes the same movement as the sinciput, *i. e.*, forward. 3. It is possible to predict the direction in which rotation will occur when we observe what part of the child first encounters the sacral segment.

The Cause of Ineffective Pains in Primiparæ during the Stage of Expulsion.—Ahlfeld ("Dtsch. med. Woch.," No. 51) attributes feeble contractions during the expulsive period to the fact that during the course of the labor the uterus is drawn upward so far that only a small portion of the fœtus remains within it, and consequently the contractions of the organ itself exert comparatively little force upon the head when it is low in the pelvis. It is upon the abdominal muscles that the duty of expulsion devolves. The indication is to support these muscles by a proper binder. If the head has not yet reached the pelvic floor, the woman may be encouraged to sit on or between two chairs, slightly separated, and to strain as if at stool. If the head is visible at the vulva, labor may be terminated by resort to Ritgen's method.

CUTANEOUS AND VENEREAL DISEASES.

By GEORGE THOMAS JACKSON, M. D.

Lanolin.—Dr. G. H. Fox ("Jour. of Cut. and Ven. Dis.," June, 1886) sums up the results of his experience with this new fat as follows: 1. Lanolin is more readily absorbed than any other fatty substance. 2. As a basis for ointments it is useful when an effect upon the deeper skin or the whole system is desired. 3. On account of its firm consistence, it is advisable to mix with it a certain amount of lard, especially in cold weather. 4. When applied to a highly inflamed skin, lanolin may not prove so bland as *fresh* lard or *pure* vaseline. 5. Considering its recent introduction, its questionable superiority, and its present cost, it can not be recommended as yet as the best basis for all ointments.

Ichthyol and Resorcin.—Seldom has any drug been so enthusiastically written of as is the case with *ichthyol* at the hands of Unna ("Monatsh. f. prakt. Dermat.," May, 1886). We pardon the fond pride of parents, and receive kindly the praises of their children. If ichthyol proves itself in the hands of other observers only half as valuable as our author tells us it is, he will have just cause for pride in his *débutant.* After restating his views in regard to the action of deoxidizing agents upon the skin, which space forbids our further noticing, our author says that ichthyol (the ammonio-sulphate is the preparation he uses) is of the greatest service in *rosacea* with or without papular acne, employed internally and externally. If there are much erythema and scaling, an ointment or paste of low percentage is to be used, or ichthyol soap and hot water, the soap being left on the skin. In the acne form high percentages are to be used. In all forms of *acne* it is to be used in full doses inwardly and outwardly. In those *eczemas,* seemingly dependent upon nervous action, in which the vesicles come out in groups and with an inclination to symmetry, especially affecting the extremities and often relapsing, ichthyol may be applied in full strength upon the extremities, and in ten-per-cent. watery solution upon the face. As soon as vesiculation ceases, its use is to be stopped externally, but continued internally. In eczemas recurring with periodic attacks of asthma, ichthyol taken internally cures both the eruption and the asthma. The drug is a reliable remedy in those eczemas occurring in strumous children about the openings of the body, nose, mouth, etc., associated with other evident signs of struma. In these cases five drops are to be given daily, and a five-per-cent. ointment is to be used externally. To intertriginous eczema it is to be applied in ten-per-cent. ointment.

The author regards *pityriasis capitis, seborrhœa sicca capitis, eczema seborrhoicum, furunculosis, erysipelas,* and *erysipeloid* as parasitic diseases, and reports wonderful results from the employment of a ten- to fifty-per-cent. ointment. In *psoriasis, sycosis,* and *lupus* ichthyol is a valuable adjuvant. *Condylomata* of the flat variety are brought to dissolution without a scar by repeated painting with ichthyol. *Keloid* and *cicatrices* are flattened out and caused to disappear under a strong ointment or collodion solution. Other diseases in which the drug does excellently are lichen urticatus, urticaria, erythema multiforme et nodosum, herpes progenitalis et labialis, zoster, and dermatitis herpetiformis. The minimal dose by the mouth and for children is about two drops; for older children and adults, five drops a day. For most people the dose can be raised to five or ten drops three times a day, and held there.

Resorcin has not so wide a field as ichthyol, but it is useful in five- to ten-per-cent. ointment in *pityriasis capitis, alopecia pityroides,* and *squamous eczema* of the head. Sometimes a twenty- or thirty-per-cent. ointment may be required to overcome some chronic and obstinate spot of disease. A ten-to-twenty-per-cent. ointment is useful in *psoriasis.* In certain forms of *eczema* of the face, specially in which the patches are dry, scaly, and itchy, it is well to use a two-per-cent. ointment or paste and increase the strength of the ointment with the progress of the disease toward recovery. In *ichthyosis, trichophytosis barbæ, cicatrices, cicatricial keloid, erysipelas,* and *epithelioma* resorcin may be used with excellent results.

Wash-leather Skin.—By this is meant a condition of the skin in which certain metals, specially silver, mark it with a black line. It was first recorded by Ferrier in 1879, and now P. H. Emerson publishes a study of fifty experimental cases ("Brit. Med. Jour.," April 24, 1886), in only four of which the phenomenon was produced, and was always most pronounced in the lumbo-sacro-gluteal region. It occurs in patients suffering, as a rule, from diseases which directly or indirectly affect either the trophic or the secretory nerves, such as renal disease, phthisis, erysipelas, and hemiplegia. In the four cases observed it preceded bed-sores. It is possible that it may be of use in foretelling the occurrence of bed-sores.

Treatment of Telangiectasis. — Dr. Böing-Uerdinger ("Dtsch. med. Wchnschrft.," April 29, 1886) reports five cases cured by the application of a four-per-cent. solution of corrosive sublimate in collodion. This is to be painted on every day for three or four days. Before its application, unmedicated flexible collodion is to be applied to the skin around the nævus. When the artificial skin formed by the sublimated collodion separates, an ulcerated surface is apt to be left which readily heals with simple dressings.

The Treatment of Keloid and Hypertrophied Scars.—These intractable lesions of the skin are, according to Dr. W. A. Hardaway ("Phila. Med. Times," May 29, 1886), amenable to treatment by electrolysis. The growths are to be treated by multiple punctures with the electrolytic needle, or by running the needle in various directions through the base. He reports three successful cases—two of hypertrophied scar and one of keloid.

The Treatment of Rhus Poisoning.—In this distressing affection Dr. P. A. Morrow ("Jour. of Cutan. and Ven. Dis.," June, 1886) has had good results from a lotion of hyposulphite of sodium, one ounce; glycerin, half an ounce; water to eight ounces. This is to be kept constantly applied. A strong solution of sulphite of sodium he has found serviceable; and in a few cases he has greatly relieved the burning sensation and the cutaneous congestion by painting the affected surfaces every two or three hours with sweet spirits of niter. Where a lotion can not be kept continuously applied, the surface should be freely covered with Pears' fuller's earth, or a powder of two parts zinc oxide, one part subnitrate of bismuth, and five parts starch, to which a little powdered camphor may be added if there is much burning. When the more acute eruptive features have begun to subside, zinc oxide ointment should be used or Lossar's paste (zinc oxide, starch, each ʒ ij; vaseline, to ℥ j. M.).

The Treatment of Acne.—The tincture of iron has long been given as a remedy in this disease. Since Dr. Sherwell read his paper upon this malady before the American Dermatological Association, the tincture of iron is being driven to the wall as the cold steel sound is more and more driven home along the male urethra. That is to say, Sherwell advocated passing the cold steel urethral sound in all cases of persistent acne in the male, and his plan has been tried and approved of by several other observers. And now Dr. M. Hutchinson, of Chicago ("Med. Record," May 29, 1886), reports thirteen cases of acne in the male successfully treated with the cold sound exclusively. Most of these patients had no symptoms pointing to the urethra, but, according to Hutchinson, they probably had a hyperæmic and irritable condition of the genital organs.

Hutchinson, having found such good effects from allaying irritability of the male genital organs with the *cold* sound, next used *hot* vaginal douches in the treatment of acne of women, and, in six cases out of seven in which this treatment was tried, a cure resulted. This treatment is founded upon the belief that acne in the female is due to hyperæmia and irritability of the uterus or appendages.

Urticarial Asthma.—Mr. Pryce ("Lancet," May 22, 1886) reports a very interesting case of urticaria which followed the application of a linseed poultice to the penis of a boy sixteen years old, there being a swollen condition of the organ consequent upon a phimosis. The eruption came out shortly after the poultice was applied and was general. Simultaneously with the eruption violent asthmatic symptoms appeared, and the eruption and the asthma coincidently underwent a series of intermissions and exacerbations. Circumscribed and diffused red patches were observed upon the mucous membrane of the nasal and oral cavities, and the voice was subdued and husky.

The Cause and Cure of Erythema Multiforme.—M. Villemin ("Gaz. hebd. de méd. et de chir.," May 28, June 4, 1886) believes that this disease is due to a special specific cause entirely independent of rheumatism, and that the cutaneous manifestations are but a part of a general disorder. He maintains that iodide of potassium in doses of at least thirty grains a day is almost a specific in the disease, causing an amelioration of all the symptoms within twenty-four to forty-eight hours. Within this time the papules and nodes will decrease in size or disappear, but the erythematous spots may remain longer. If there is any tendency to relapse, the iodide will abort it.

Rheumatismal Nodules.—Dr. F. E. Porter ("Boston Med. and Surg. Jour.," June 30, 1886) reports a case of this affection similar to the one reported by M. Guyot in the "Annales médico-chirurg.," No. 3, 1886. The case is of interest to us from the dermatological standpoint because it was mistaken for hives; not by the author, however. The back of the patient's hand was swollen and bunches appeared there and on her right leg. The nodules were irregular in shape, hard and somewhat tender, and varying in size from that of a split pea to that of a hazelnut. There was also rise of temperature with swelling of several joints. The malady yielded readily to the salicylates.

Hydroa.—About this term much obscurity gathers. Its origin is ancient. It has been revived, and again lapsed with other dermatological names, such as "porrigo" and "lichen simplex." An attempt is now made by H. R. Crocker ("Brit. Med. Jour.," May 22, 1886) to more clearly define its use, and therefore to give it a new lease of life. It is proposed, then, to use the term "hydroa herpetiforme," or, if general agreement could be obtained in its use, "hydroa," to designate a group of diseases distinct from pemphigus, herpes, and erythema exudativum, while having some features in common with them all. The characteristic features of the group are the presence, at some period of their course, of erythema, chiefly but not exclusively of a circinate type, of vesicles, bullæ, or pustules, with a tendency to herpetiform groups. These different elements are present in varying ratio to each other, but there is always intense pruritus, and the eruption tends to undergo evolution at its periphery and involution at its center. The disease runs a long, but ultimately favorable, course, with frequent exacerbations and remissions, and a tendency to recur, even after long intervals, though generally amenable to treatment. He would exclude divers anomalous bullous eruptions, such as that from the administration of iodide of potassium; and Bazin's "hydroa vésiculeux," which is herpes iris.

The term "hydroa herpetiforme" was one of Tilbury Fox's, and includes the so-called "hydroa bulleux," "pemphigus pruriginosus," "herpes gestationis," "herpes circinatus bullosus," and "dermatitis herpetiformis." It is proposed to adhere to Fox's term because he was the first to give the disease a comprehensive designation. Eight illustrative cases are given of the various allied forms. Hebra's "impetigo herpetiformis" differs from hydroa herpetiforme in the total absence of erythematous, vesicular, or bullous lesions, the eruption being pustular from the first; in the absence of pruritus, and in the severity of the general symptoms, the disease having ended fatally in all but one case.

The treatment consists in hygienic and dietetic measures, abstention from alcoholics, and complete mental and bodily rest. Internally, arsenic in full doses to the point of toleration is the most reliable medicine. Tincture of belladonna is good when arsenic fails, but it must be given in full doses. Quinine in two- to five-grain doses and cod-liver oil are indicated at times. Locally the best application is a lotion of two drachms of liq. carbonis detergens to eight ounces of water.

The Evolution of Venereal Disease.—It was only in May of this year that, in an article in the "Edinburgh Med. Jour." by Milton, it was stated that the question of the unity and duality of syphilis was yet far from settled. This is well illustrated by the article by F. Le Gros Clark (*Ibid.*, April 24, 1886), in which gonorrhœa, chancre, and the initial lesion of syphilis are held to be derived from the same source—namely, the secretion of an inflamed urethral mucous membrane. The writer calls in question the specific nature of gonorrhœal ophthalmia; believes that mild secondary symptoms follow a chancre after a short period of incubation, and that the initial lesion differs from it only in having greater induration, a longer period of incubation, and more pronounced secondary symptoms. He holds that cases of secondary syphilis may arise from a gonorrhœa, and that it is not necessary to assume the existence of urethral initial lesions in cases arising apparently without local lesion. He has never met with a case which suggested to him the presence of an initial lesion in the urethra. In treatment he favors the bichloride of mercury with sarsaparilla, though it would seem that the subchloride of mercury (calomel) was meant, as we are advised to give half a drachm to a drachm of it a day for a long-continued time.

Syphilitic Reinfection.—Neumann ("Allg. Wien. med. Ztg.," May 11, 1886) reports a case of undoubted reinfection of syphilis. The patient was under his care in November, 1883, with her first attack. In December, 1885, she returned with an initial lesion on the vulva, which was followed by a general erythematous eruption of unmistakable syphilis, showing that the lesion of the vulva was an initial lesion and not an ulcerated papule. He regards this case as evidence that syphilis is a curable disease.

The Prognosis in Syphilis.—Fournier ("France méd.," May 2, 527, 1886) has rendered good service by pointing out a number of conditions which should influence our prognosis in syphilis, and make us anxious lest what we might consider not a very bad case should turn out exceedingly grave. These conditions are alcoholism, extreme youth or old age, scrofula, tuberculosis, malarial poisoning, depressing agencies of all sorts—such as bad hygiene, pregnancy, insufficient food, and prolonged lactation. That all these are grave factors in the prognosis of the disease is well known and recognized. We would draw attention to two parts of his paper, which embody views not so generally accepted or familiar as the foregoing. In speaking of the relation between scrofula and syphilis, he says: "It is certain that syphilis very often reacts upon scrofula so as to exaggerate it. Syphilis, either hereditary or acquired in very early life, is the cause of lupus. Scrofulous subjects who acquire syphilis in early life are disposed to lupus." Among the depressing agents and as a factor of gravity, Fournier gives prominence to a dissipated life, and to that jaded condition acquired by the luxurious habits of the club and the irregular life of a man of the world without any occupation. These people, he says, are prone to a precocious course of evolution of the disease, and succumb rapidly to it. They very frequently have cerebral syphilis, which is specially liable to be the case among gamblers and stock speculators.

Miscellany.

Insanity Cured by Erysipelas.—Dr. H. Landerer ("Allg. Ztschr. f. Psych.," xli, 4, 5; "Arch. de neurol.," July, 1886) relates the history of a case of melancholia, of seven months' standing and progressing toward incurable dementia, in which the patient, a young girl, recovered completely from her mental affection simultaneously with the subsidence of an attack of facial erysipelas spreading to the scalp. Two or three years had elapsed when the report was made, and she still maintained perfect mental health.

Skepticism about Hydrophobia.—"We have been somewhat surprised," says the "Neurological Review," "to notice the readiness with which so many condemn the method of M. Pasteur for arresting or preventing hydrophobia. Some have even gone so far as to intimate doubts as to the reality of any such disease. It appears to us, to say the least, curious how it is possible for any one to consider rabid animals, to witness the symptoms they present, the progress of the disease, and finally their death, and doubt whether it actually exists. It is to us almost as much of a surprise to find persons doubting whether there is, or may be, such a disease as hydrophobia in the human species, especially as communicated by the bites of rabid animals. If it is not well established that such a disease as rabies really exists, then, for ourselves, we hardly know what can be considered established. And we have been to a less degree surprised at the readiness with which M. Pasteur and his proposed method of arresting or preventing hydrophobia in man have been condemned, too often by those who have given but little attention either to the character of the man himself or to the course of experimentation upon which his views are based."

The late Dr. Hamill, of Chicago.—The "Journal of the American Medical Association" says of Dr. R. C. Hamill, who died in Chicago on the 21st of July: "Although seventy-eight years of age, he had continued to attend to his ordinary professional duties more or less until near his death. For many years he had been an active member of the Chicago Medical Society, the Illinois State Medical Society, and the American Medical Association, to the 'Transactions' of all of which he had made valuable contributions. He was a faithful, generous, and skillful general practitioner, commanding the full confidence of a wide circle of patrons. As a citizen, he was universally respected, for he was a man of perfect integrity, whose highest enjoyment was derived from relieving human suffering and in promoting the best interests of the whole community."

A Centenarian.—The "St. Petersburger medicinische Wochenschrift" states that the hundredth birthday of Professor Chevreul, of Paris, is to be celebrated on the 31st of this month.

Newspaper Medicine again crops out, this time in the columns of a Boston daily, according to which the stomach of a man who had swallowed a partial set of artificial teeth, which lodged in the cardiac orifice, was drawn out through a transverse incision in the left side of his abdomen "and then cut open, when by the insertion of his arm to the elbow Dr. —— was able to reach and remove the teeth."

The Health of Chicago.—According to the Health Department's "Condensed Statement of Mortality," for the month of July, in a total mortality of 1,415, there were 285 deaths from cholera infantum, 12 from cholera morbus, 10 from croup, 34 from diarrhœa, 13 from dysentery, 56 from diphtheria, 50 from entero-colitis, 1 from erysipelas, 9 from cerebro-spinal fever, 13 from scarlet fever, 36 from typhoid fever, 8 from typho-malarial fever, 25 from measles, 1 from mumps, 4 from pyæmia, 3 from septicæmia, 1 from thrush, and 11 from whooping-cough.

A Correction.—Dr. Hiram Corson writes that, in looking over his paper "On the Statistics of Three Thousand and Thirty-six Cases of Labor," which was published in this journal for May 15, 22, and 29, 1886, he discovers that in the thirty-nine cases of twins occurring in the two thousand three hundred and eighty-seven cases of labor, he has given a total of thirty-five males and thirty-three females. The latter number should be forty-three.

THERAPEUTICAL NOTES.

Calomel as a Diuretic.—Jandrossik ("Dtsch. Arch. f. klin. Med.," xxxviii, 1866) has used this drug in several cases of cardiac dropsy, combining three or four grains with an equal amount of jalap, and giving this dose from two to four times daily. He states that a sudden increase in the quantity of urine is noticed on the second (sometimes as late as the fourth) day after beginning the administration of the remedy. It is necessary to check the purgative action of the calomel by means of opium. It is generally sufficient to continue the treatment for two days, then suspending the use of the drug and waiting until diuresis occurs. According to Jandrossik, calomel appears to have a specific action in dropsy of cardiac origin; it does not cause diuresis in healthy subjects, and is valueless in cases of renal dropsy. The author believes that calomel acts not upon the kidneys, but upon the blood, causing the latter to absorb the fluid from the tissues.

Osmate of Potassium.—Merck, of Darmstadt, according to the "Med. and Surg. Reporter" (July 24, 1886), has prepared this salt, which is free from the irritating properties of osmic acid. Wildermuth has used it with good results in several cases of epilepsy, administering daily a dozen pills, each containing one sixty-fourth of a grain of the osmate.

The Treatment of Corneal Spots by Massage.—Heisrath ("Recueil d'Ophthalmologie"; "Practitioner") recommends daily rubbing of the cornea with the following ointment:

Yellow oxide of mercury	1 part;
Vaseline	60 parts.

Mix thoroughly and rub with

Iodide of potassium	30 parts;
Bicarbonate of sodium	25 "
Vaseline	50 "

The pain and lacrymation following the operation are rarely prolonged above half a minute. According to its author, this method of treatment promotes the rapid absorption of exudations by stimulating the intracorneal circulation.

Arsenite of Bromine in Glycosuria.—Dr. Davis ("Jour. of the Am. Med. Assoc.") administers to diabetics from three to five drops of this remedy daily, at the same time regulating the diet strictly. He reports five cases in which the sugar rapidly disappeared from the urine under this treatment. He recommends that the administration of the drug be continued for several weeks after the disappearance of the sugar.

Iodide of Sodium in Angina Pectoris.—Huchard ("Jour. de méd. de Paris," May 23, 1886) reports twenty-five cases in which a cure was effected by the use of the iodide in daily doses of from fifteen to forty-five grains, continued for not less than a year and a half. He does not promise a permanent cure in less than three years. The other salts of potassium he regards as cardiac poisons, which aggravate rather than relieve the angina.

Amyl Nitrite in Cocaine Poisoning.—Schilling ("Ctrlbl. f. d. ges. Therap.," Feb., 1886) reports an interesting case of poisoning by the injection into the gums of two drops of a twenty-per-cent. solution of cocaine. Amaurosis, deafness, and complete loss of motion and sensation occurred. Regarding the phenomena as due to cerebral anæmia, consequent upon the contraction of the blood-vessels, he caused the patient to inhale nitrite of amyl, by which she was rapidly relieved.

Antipyrine as a Uterine Hæmostatic.—Chéron ("Rev. méd.-chir. des mal. des femmes"; "Dublin Jour. of Med. Sci."), after conducting a series of experiments with the view of determining whether ergot, iron, or antipyrine was of the greatest value as a local hæmostatic in uterine hæmorrhage, decided in favor of the last-mentioned drug. Cosati speaks highly of the use of antipyrine for this purpose. A four-per-cent. solution is the one usually employed, especially in cases of epithelioma of the cervix, with a tendency to hæmorrhage. Chéron has used it successfully to arrest bleeding during minor gynæcological operations (perineorrhaphy, etc.).

Narceine as an Expectorant.—Brown-Séquard ("Gaz. hebdom. de méd. et de chir."; "Dublin Jour. of Med. Sci.") recommends this drug in cases of bronchitis with profuse viscid expectoration. The dose is from one half to one grain in pill form.

Salicylate of Iron in the Treatment of Infantile Diarrhœa with Fœtid Stools.—Dr. Braithwaite ("Brit. Med. Jour.," July 17, 1886) describes a form of diarrhœa in children in which the motions are extremely offensive, which is not affected by the administration of astringents, or by regulation of the diet. He recommends the use of teaspoonful-doses of the following mixture:

Sulphate of iron, Salicylate of sodium, } each	20 grains;
Glycerin	3 drachms;
Water	up to 3 ounces.

Dissolve the iron and the salicylate separately and then mix them. A teaspoonful should be given every hour until the stools become black, when the same dose is to be repeated at intervals of three or four hours. Salicylate of iron, which results from the above-mentioned combination, acts as a disinfectant, destroying the bacteria within the intestine.

The Inhalation of Cold Air in Fevers.—Dr. Woitkewitsch, of St. Petersburg, according to the "Deutsche Med.-Zeitung" for July 8, 1886, has constructed an apparatus by means of which air, cooled by passing through an ice-chamber, can be inhaled. He reports as the result of upward of seventy experiments the following: 1. Cold inhalations (continued for fifteen or twenty minutes) have but little effect in reducing the temperature. 2. The pulse and respiration are diminished to a marked degree. 3. The patients express themselves as much refreshed by the inhalations and sleep much better. 4. In acute pulmonary affections the bronchial secretion is greatly lessened.

Lectures and Addresses.

LECTURES ON
THE DIAGNOSIS AND TREATMENT OF DISEASES OF THE CHEST.

DELIVERED BEFORE THE ASCLEPION CLUB,

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Lecture II.

(*Concluded from page 199.*)

The next of the chronic diseases of the lungs to claim our attention is that known as *chronic interstitial pneumonia, cirrhosis of the lung*, or fibroid phthisis. The origin of this disease is obscure, but we may say that there are at least three distinct ways in which it is developed. First, from chronic bronchitis. The inflammatory process in this case involves all the coats of the bronchi, and finally occasions a marked thickening of the outer fibrous coat. This is known as *peribronchitis.* From the outer coat of the bronchial tube it slowly extends to the neighboring fibrous tissue, and thus reaches out into the interlobular and lobular connective tissue. The lung thus slowly loses its normal vesicular structure and becomes less permeable to air. The second cause is acute pneumonia, usually of the catarrhal or lobular form. The inflammatory infiltration is largely cellular in character, but does not soften and suffer reabsorption, but, like scar tissue, or the results, *e. g.*, of a periosteal inflammation, becomes transformed into fibrous tissue. This, of course, involves bronchial walls, lobular and interlobular connective tissue, blood-vessels, and aveoli. As in the former case, the permeability of the lung to air is decreased or entirely abolished. The bronchial walls lose their elasticity, and, through the combined effects of the respiratory movements and the contraction of the inflammatory new formation, as described above, dilatation is produced.

The third cause, the relative frequency of which is somewhat doubtful, is pleurisy. The course of events, as I understand it, is about as follows: When effusion takes place into the pleural cavity, the lung collapses, being displaced by the accumulating fluid. Should the fluid be reabsorbed within a certain undetermined period, which undoubtedly varies in accordance with other internal conditions, the lung re-expands and resumes its normal condition. But, should the fluid remain in the cavity, there finally comes a time when its removal will not be followed by a restitution of the structural integrity of the lung. We need not look far to find the reason for this. As the lung shrinks, the pleura covering it becomes very much wrinkled and contracted. It is covered by an inflammatory exudate. This in time will give rise to fibrous thickening of the pleura, with loss of its elasticity. Besides this, the peripheral portions of the lung, when they remain wholly or partially collapsed, suffer from passive hyperæmia, and a slow development of new connective tissue takes place. This follows the course of the normal fibrous stroma of the lung and gives origin to distinct bands of fibrous tissue which stretch from the pleura inward toward the hilus. The combined resistance of this fibrous tissue and the altered pleura will forbid a complete re-expansion of the lung. Inflation is still further hindered by the obliteration of many of the pulmonary alveoli which takes place in these cases.

These changes come about very slowly, but they are inevitable if the pleuritic effusion is neglected and allowed to remain indefinitely. The subject will receive fuller attention in the lecture upon the diseases of the pleura.

Extensive fibroid change of the lung is not common as a result of pleurisy; at least I have not found it so in the very numerous *ante-* and *post-mortem* cases which have come under my observation.

Chronic interstitial pneumonia, if by that term we mean simply an inflammatory process which causes an increase of the pulmonary connective tissue, is a very common disease. But the typical cirrhosis described by Sir Dominick Corrigan is of rare occurrence. Its ætiology is obscure, probably not always the same; it may originate in different primary inflammations, as stated above. We can not stop in this paper to examine very closely into the many clinical and pathological questions connected with this subject, but must limit ourselves to some practical considerations regarding it.

The questions to be settled by the diagnostician are the presence and extent of fibrosis in the lung, its association with other non-tubercular lesions, and whether caseation and tuberculization have yet occurred. Its presence is determined by the shrinking of the side, alteration of the percussion note, changes in the respiratory and vocal sounds, and great diminution or entire loss of expansion. As for the contraction of the chest, it is not so marked below the nipple, nor is the shoulder so drawn down as in the deformity which results from empyema and other severe pleurisies. Neither is the curvature of the spine so great. A very important clinical difference, which I do not remember to have seen noticed by any writer upon the subject, is that, unless the collapsed lung has become tubercular, the pleuritic chest will improve from month to month, and from year to year, while the fibroid lung will steadily contract, or, at the best, remain stationary. We could not expect such a lung to expand, except through the development of a collateral emphysema, which would be no gain to the patient.

The only other physical signs which I shall discuss are those related to the solidification of the lung. We sometimes get the usual dullness with bronchophony and bronchial voice, as they are found in acute hepatization and in phthisis. This is most frequent in the early stages of the malady. In many instances the percussion dullness is well marked, but the respiratory sounds are almost or even entirely absent. This must be owing to changes in the acoustic properties of the new formation, resultant from its development into fibrous tissue. These are about the physical signs of effusion into the pleural cavity. The diagnosis is made, first, on the history of the case, if this can be obtained; second, by the percussion not usually giving such complete flatness as in pleurisy—it has a tympanitic quality conferred upon it by the dilated bronchi which lie beneath the surface; third, the retraction of the side is greater than when fluid is beneath and it is at too high a level. When the deposit is in the lower portion of the lung, it may be necessary to aspirate in order to make the diagnosis positive. The râles heard in this disease are not numerous, and are usually those of chronic bronchitis. There may, however, be crumpling, crackling sounds resembling those heard in ordinary phthisis.

The retraction of the lung has two other curious effects worthy of notice. The first is that, while the percussion dullness upon the affected side is well marked anteriorly, it may disappear as we approach the border of the sternum, and give place to pulmonary resonance. The reason is, that the sound lung has dilated, so that its anterior border has passed beyond the median line and encroached upon the opposite side of the chest. This distension of the sound lung, so carefully described by Walshe, I have frequently observed post mortem.

I well remember a case which Dr. Leuf and I encountered when making some researches upon the topographical anatomy of the heart, in which the anterior border of the right lung was an inch and a half to the left of the median line.

Secondly, the retraction of the lung alters the anatomical relations of the heart. When the left lung is diseased, its retraction draws the heart toward the left, so that the apex may come to the mammillary line; while the pulmonary artery, no longer covered by the lung, can be seen and felt pulsating an inch or more to the left of the sternum, in the second intercostal space. When the right side is retracted, the heart is drawn in that direction, epigastric pulsation is distinct, and the apex-beat is lost behind the hypertrophied left lung.

If tuberculosis supervenes upon the primary inflammatory, or, as some prefer to term it, degenerative, process, the patient becomes more feeble, hectic fever and night-sweats make their appearance, and fine moist râles appear, not only in the contracted lung, but at the apex of its fellow. The expectoration, which has had the purulent, more or less fœtid character observed in bronchiectasis, may change and become more conglomerate. If phthisical cavities form, nummular sputa will indicate their presence. These symptoms will sometimes appear, hold their sway for a time, and then gradually fade away, leaving the patient as before, only a little weaker.

Some cases of phthisis, beginning in the usual manner, have a tendency to progress slowly and to the formation of fibrous tissue in the lungs. When the contraction becomes well marked, the tendency to hæmoptysis is very great, so that, while the disease runs a very chronic course, the patient suffers frequent alarms from this cause. The hæmorrhage comes apparently from the bronchial mucous membrane, and is the result of a collateral hyperæmia, due to the occlusion of so many of the pulmonary vessels. Between this condition and the typical cirrhosis there are many grades, shading from one to another, without any distinct line of demarkation.

The treatment of chronic interstitial pneumonia, as far as it is at present understood, must be conducted with reference to the prolongation of life and the prevention or cure of tuberculosis. The restoration of the original pulmonary structure is beyond the range of possibility.

The pneumatic treatment, if resorted to, should be used with the greatest caution. The proper method is by inhalation of compressed air, with some vapor or medicinal spray. The objects to be accomplished are, first, the local treatment of the bronchitis and bronchiectasis, and, second, the stimulation of the nutrition of the lung, particularly the sound one. To accomplish this, the pressure should not exceed about one sixtieth of an atmosphere. It should never be enough to bring any strain upon the diseased lung, for, as I have already insisted, the contracted portion can not have its vesicular structure restored; any forcible dilatation will only result in rendering the sound portions of it emphysematous. I have seen injury produced in this way. On the other hand, Dr. Platt and I have now a patient suffering from extensive interstitial pneumonia and bronchiectasis, the result of an acute metastatic pneumonia, who has improved very greatly since this treatment has been adopted.

It is always well, in the treatment of disease, to study its natural course, and avoid antagonizing any processes which tend toward recovery.

The formation of fibrous tissue in these chronic interstitial inflammations of the lung is the best course possible under the circumstances, and it is doubtful if any attempt should be made to forcibly oppose its contraction. The attempt, judging from my own observation and from analogy with all we know in regard to the behavior of scar tissue, will not be successful, and may do great harm to the rest of the lung, and increase the size of the bronchiectatic cavities.

It would appear to me more rational to do something to favor contraction of the side; indeed, this plan appears to promise something in the way of preventing and even curing the bronchiectasis and preserving the remaining healthy portions of the lung from emphysema. So much am I impressed with this view that I propose to try it on the next favorable case which presents itself. The plan is to resect enough ribs in the axillary region to allow the diseased part of the lung to contract as far as is necessary to avoid further traction upon the bronchial walls. It is an operation which, if early and skillfully done, would involve no danger to life, and may be productive of great good.

In the local treatment of fibroid phthisis I have obtained most gratifying results from the use of astringent and antiseptic sprays. They may be used at the physician's office (as frequently as possible), and by the patient at home, if he have a suitable apparatus. The physician should apply the treatment himself as frequently as possible, for he can, with practice, do it far better than the patient or his friends. The home treatment should consist in the inhalation of the vapor of turpentine or eucalyptol, with steam, or a steam atomizer. Solutions of carbolic acid and thymol are very useful. The inhaler of Dr. Evans ought to be very useful for such cases. The constitutional treatment should be regulated in accordance with the needs of the patient, the object being to procure as good a state of nutrition as is possible in the individual case. Our first care should be for the digestive apparatus. Any gastric or gastro-enteric catarrh should be relieved, and then, if necessary, something given to stimulate the appetite. An out-of-door life, in a dry, stimulating climate, should be recommended, with plenty of animal food and cod-liver oil. Exercise, however, should not be violent, or ever prolonged to the point of fatigue. Climbing heights and such exercises as induce great respiratory activity are injurious. These are frequently the cause of hæmoptysis.

The efficacy of specific remedies, except for their influence over disturbances in other parts of the body, or when syphilis is an ætiological factor in the case, is very doubtful. I do not believe that mercury, or iodine, or any other drug given internally, will cause the liquefaction and absorption of organized connective tissue, either in the lung or between the pleural surfaces. That they may, however, through their action upon the digestive and other glandular apparatus, contribute toward the general improvement of the patient, is undoubtedly true.

Chronic emphysema is in many ways the reverse of interstitial pneumonia. As to its origin and pathological character, it is essentially non-inflammatory. Instead of inflammatory new formation, there is degeneration; instead of contraction, expansion; instead of a tendency to, or actual association with, phthisis, it—in its typical form—presents an antagonism to that disease. It is not necessary to make any further allusion to its ætiology than will naturally be involved in the discussion of diagnosis and treatment.

The diagnosis would seem to be so easy that a mistake could not be made, and this is true of the typical form, where the chest is dilated either symmetrically or in the barrel shape. But where the disease is less extensive, where it is limited to the upper and anterior portion of one or both lungs, and when the patient is emaciated and weakened from malnutrition of any kind, it is more obscure. The disease for which such cases of emphysema are apt to be mistaken is phthisis pulmonalis.

We may find wasting, constant cough of long standing, even night-sweats from exhaustion. The resonance on percussion is diminished, the expiratory sound prolonged, and forcible expansion of the chest may produce fine crackling râles. The diagnosis depends upon the history of the case—which usually extends over a longer period than that of phthisis—on the general aspect of the patient, and on the correct interpretation of the physical signs. The patient has not the pinched appearance and pallor of the consumptive, and the chest is not shrunken, though its movements are restricted. The fixation of the chest is in the position of inspiration, while in phthisis it is in that of expiration. This is, however, not so pronounced as when the emphysema is general. In the early stage of phthisis, which is the only one for which emphysema would be mistaken, the upper portion of the chest is often full and the inner ends of the clavicles stand high.

The percussion note in emphysema usually differs in its quality from that of phthisis. While frequently high-pitched, it still gives a resonance not found when the apex is infiltrated, unless some excavation has occurred. The respiratory sounds, too, differ in quality. The expiration, though prolonged, is low-pitched, and the prolongation is greater than in phthisis. In other words, there is an *actual* prolongation of the expiration, while in consumption the expiratory act is little, if at all, prolonged, but becomes audible by transmission through the partially solidified lung. The crackling râle, heard with forcible expansion of an emphysematous apex, is very dry and light in quality, and usually disappears after the patient has made a few active inspirations. Then it is to be noted, finally, that the dyspnœa of emphysema differs in its objective manifestations from that of phthisis. While the respirations in the latter disease are rapid and panting, in the former they are slower and more labored. In the incomplete cases of which we have been speaking there is no noticeable acceleration of breathing while the patient is quiet, while in phthisis it is rare not to find an increased rapidity, even during rest. The post-meridian elevation of temperature in phthisis is also an important diagnostic sign.

In order to make an intelligent prognosis, it is always well to determine the extent of the emphysema, the amount of accompanying bronchitis, and the condition of the heart and digestive apparatus. If the epigastric pulsation is very well marked, if the jugulars are full, and the face has a cyanotic and anxious look, while the radial pulse is small, the nails livid and the extremities cold, the life of the patient is drawing to a close. In this case the right heart is overfilled, the tricuspid valve more or less incompetent, and the tributaries of the inferior vena cava engorged with venous blood. The liver undergoes a cirrhotic change, and is converted into what is known as a nutmeg liver. The gastric and mesenteric veins are overfilled and a gastro-intestinal catarrh results. The spleen also enlarges. It is further probable that the venous engorgement of the abdominal nervous centers, the semi-lunar and other ganglia, has its special influence in the derangements of digestion and assimilation which are observed in this disease. Swelling of the lower extremities is another evil omen.

The treatment of emphysema should be directed both to the local and general conditions.

As local measures, it is important, first, to remove any mechanical causes which may exist in connection with the occupation of the sufferer. Anything which requires considerable muscular effort, and in consequence increases the labor of respiration, should be avoided. Playing on wind instruments or using a blow-pipe should be strictly prohibited. Then the bronchial catarrh and asthma should be controlled if possible. In addition to the other means, local medication, by means of sprays, is most efficient for this purpose. They should be used in the same way as in the treatment of chronic bronchitis. The pneumatic treatment has not been sufficiently tested to allow of any positive statement in regard to its efficacy in this disease. The proper method of applying it is to allow the patient to expire into rarefied air. This can be accomplished by means of Waldenburg's apparatus, or some modification of it. It exerts its effect by increasing the efficiency of the expiration. I need hardly say to you that the prime difficulty under which an emphysematous patient labors is that his lungs will not contract and expel the air sufficiently in expiration. By connecting the air in the respiratory passages with that which is under diminished pressure, the tendency to equalize pressure in the two will draw the air out of his lungs, and compel them to contract. The same thing is accomplished by the pneumatic cabinet of Dr. Williams, if we increase the pressure of air upon the surface of his body. The external atmosphere is then relatively rarefied.

If a spray is inhaled during the inspiration, more of it penetrates than during ordinary breathing, as there is more passage of air in and out of the chest. It is necessary, for this purpose, to remove the pressure during inspiration, for, if the same pressure is maintained inside the cabinet during both respiratory phases, the amount of tidal air, and consequently that of spray inhaled, is diminished.

I have accomplished quite a reduction of the circumference of the thorax in one case of emphysema, in St. Mary's Hospital, by having the house physician put a Martin's rubber bandage about the patient's chest. But the constant pressure became irksome, and the skin was somewhat excoriated by the rubber. The method is worthy of a further trial.

The asthma and constant dyspnœa are to be relieved by iodide of potassium or of sodium, and arsenic. The general health of the patient also should be looked after, special pains being taken to secure good digestion and primary assimilation. If possible, such patients should avoid going out on windy days, or in the night; should be careful to keep the feet warm, and should protect the body by suitable clothing so as to prevent any chilling of the surface. A change of climate during the winter is particularly advisable for those living on the North Atlantic sea-board.

Alcoholic beverages are, in most cases, harmful, or should, at least, be very carefully supervised, so as to avoid the occurrence of gastric and gastro-intestinal catarrhs.

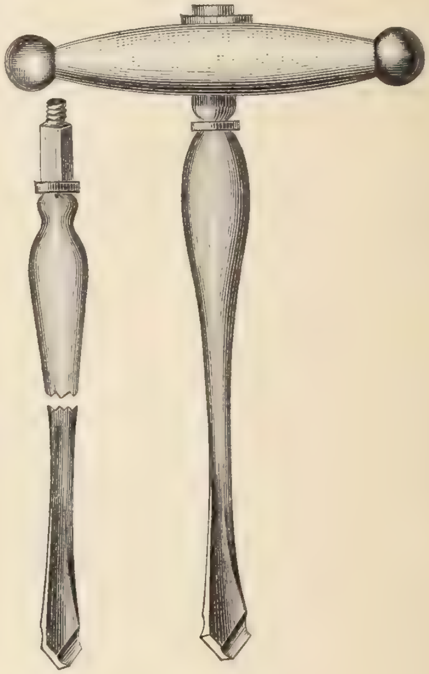
The heart should be sustained rather through the nutritive system than by drugs; still it may be necessary, at times, to give, temporarily, digitalis, convallaria, night-blooming cereus, or nux vomica for this purpose. When the patient comes to require these drugs constantly, the end is very near at hand and the prognosis should be made accordingly.

Original Communications.

ON CERTAIN TECHNICAL DETAILS
RELATING TO
PERFORATION OF THE MASTOID PROCESS, AND THE AFTER-TREATMENT.*

By ALBERT H. BUCK, M. D.,
NEW YORK.

In a series of communications to the "Archiv für Ohrenheilkunde," Professor H. Schwartze, of Halle, Prussia, lays down in very clear and positive language what he believes to be the best manner of perforating the mastoid process and of conducting the after-treatment. As is well known to members of this society, he very much prefers small gouges and chisels to the drill in accomplishing the desired object. While I hesitate, with my comparatively small experience, about disputing the correctness of the conclusions drawn by one who has already perforated the mastoid process one hundred times, I am satisfied that, so far as the form of drill commonly employed in this country is concerned, Schwartze's condemnation is unjust. My impression is that his remarks have reference to some form of drill or boring instrument totally different from that which is pictured here and which is a copy of that published in Ashhurst's "International Encyclopædia of Surgery."



As some of the members present may not have read Schwartze's series of articles, I will repeat here, in the form of brief extracts, what he has said in regard to the employment of drills:

> "The danger attaching to hand drills lies chiefly in the uncertain manner in which they can be guided, in the facility with which they are made to travel in the direction in which we do not want the instrument to go, especially if the bone is somewhat softened."
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> "The narrow opening in the bone affords opportunity for only a very inadequate irrigation of the diseased cavity in the bone, and generally at the end of a few days the growth of granulations prevents the irrigating fluid from entering the artificially established fistula. Furthermore, experience shows that the use of boring instruments is accompanied more often than usual by traumatic erysipelas and by severe septic fever."

Another danger has been suggested—not by Schwartze, so far as I know, but by some surgeons in New York—viz., that of suddenly plunging the instrument into the lateral sinus, into the brain, or into some other important part.

Schwartze's first objection is of a personal nature and can not be overcome by arguments. I can only say that in using the drill I have never been conscious of its going in the direction in which I did not want it to go. In one of my cases, it is true, it managed to lay bare the fibrous wall of the lateral sinus; but the fault in this instance was not with the instrument, but with my knowledge of anatomy.

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* Read before the American Otological Society, July 20, 1886.

In regard to his statement that the instrument is especially liable to go astray when the bone is softened, I may say that the very fact that the bone is in this condition is almost sure to lead the operator to proceed cautiously in his manipulations. However, this softening of the bone is the condition in which small bone chisels and gouges may be used with peculiar advantage. But the cases in which the outer portion of the mastoid bone is softened are exceptional, and my remarks throughout this article have reference rather to what is commonly encountered in practice. I might amplify this statement by saying that there are pathological conditions of the mastoid process in which the drill alone could not possibly suffice for the attainment of the purpose desired.

The second objection—the narrowness of the opening made by the drill—applies clearly not to drills in general, but to some particular pattern and size of drill; for it is plain that they may be manufactured of any size desired. Of the three sizes which I am in the habit of employing, the largest measures a trifle more than one quarter of an inch, the smallest a trifle more than one eighth of an inch, in diameter. I always employ the largest drill at the beginning of the operation and endeavor to give the artificial opening a diameter of not less than one quarter of an inch until I am in close proximity to the antrum. Then I finish the remaining portion of this artificial channel with one of the smaller drills, and sometimes even with the aid of a dentist's burr or reamer—a very safe but not a very efficient instrument unless run by a dental engine. Such an opening into the antrum affords all the space that is necessary for efficient irrigation and subsequent drainage. If a sequestrum of bone is encountered, the channel should not be narrowed on reaching the antrum, but rather widened. Up to the present time, however, I have always found bone sequestra lying in a comparatively large cavity, the outer limits of which approached much nearer to the outer surface of the mastoid process than does the antrum as ordinarily encountered in these operations. It has, therefore, been a comparatively easy matter to either break the sequestrum of bone and extract it fragment by fragment, or to make the opening large enough to extract the mass entire.

So far as Schwartze's last indictment is concerned—viz., that the use of boring instruments is accompanied more often than usual by traumatic erysipelas and by severe septic fever—I can only say that in my experience these accidents are rare; and I do not believe that a comparison of Schwartze's reported cases with my own would show that these complications had occurred more frequently among the latter than among the former. In fact, my impression is that they are of more frequent occurrence in his series of cases than in mine. However this may be, I should not feel like drawing any other conclusion from these facts than that *the hygienic surroundings were better in one class of cases than in the other.*

As regards the objection raised by surgeons in this country—viz., that in the use of the drill there is danger of plunging it into the lateral sinus, into the brain, or into some other important part—I will reply by repeating what I have said elsewhere: "The forefinger of the hand which guides the drill should rest firmly against the bone. If this precaution be taken, there will not be the slightest danger of our suddenly plunging the sharp point of the drill into parts which might thereby receive serious damage." To this I may add the further remark that the rules governing the perforation of the mastoid process with the drill are now laid down with such clearness that no person has any business to direct his instrument toward any place where he may inflict serious damage, should his instrument make such a plunge as the objectors anticipate on theoretical grounds. But there is still another reason, of a mechanical nature, why such an uncontrolled plunge of the drill is not at all likely to occur. All those who have used the pattern of drill which is now under consideration will bear me out in the statement that, by reason of the peculiar disposition and relations of its cutting edges (the surface of bone cut by them representing that of a shallow cone), ample warning is conveyed to the fingers or hand of the operator when the point of the instrument is beginning to enter a cavity. When this sensation is felt, the surgeon should lay aside the drill and ascertain by probing exactly what are the conditions existing at the bottom of the wound in the bone. According to the results ascertained by the exploration with the probe, he may either proceed with the work of drilling or he may resort to other measures. Those who are timid or who distrust their knowledge of the topography of this region, may readily have the drill provided with a movable guard, and so avoid all possibility of falling into the dreaded ditch.

Thus far I have simply attempted to answer the objections raised against the drill. I now propose to compare the two operative procedures and to point out what seem to me to be the objectionable features belonging to the chiseling method. I may say at the start that I have no disposition to condemn this method. The successful results obtained by Schwartze place it on a secure basis, beyond the reach of any such condemnation. But when so high an authority claims for it such great superiority over any other method, I feel that surgeons generally will accept his statement as final and authoritative. It seems to me, therefore, that at the present time I may very properly enter my protest against the acceptance of the chiseling method as the one to be preferred to all others. I believe that I can show that the use of the drill secures at least as successful results, and is as worthy to be adopted by surgeons, as the other method.

In the first place, in employing chisels for the purpose of cutting a channel through the mastoid process down to the antrum, we are obliged to make a somewhat larger wound in the superjacent soft parts. This means a more conspicuous scar after healing has taken place. This is perhaps a trivial objection. Of a more serious nature is the necessity of chiseling away an extensive portion of the outer surface of the bone; for, in cutting from without inward, we can not, as with the drill, make a cylindrical channel, but are obliged to remove a conical mass of bone, very broad at the outer surface of the mastoid process, and proportionately narrow at the antrum. In this manner a large number of comparatively healthy mastoid cells are laid bare, and many small blood-vessels in the substance of the bone must necessarily be divided. This establishment of a decided excavation in the bone leaves a correspondingly ugly depression in the skin behind the ear after the parts have healed. I also believe that this very extensive destruction of bone-tissue delays the final healing to a material degree.

In the next place, more time and more manual skill are required in chiseling out a suitable artificial channel in the bone than is the case when the drill is employed. Furthermore, the procedure is not wholly free from danger. Schwartze himself admits that in one of his cases death resulted from traumatic meningitis, caused by injury inflicted by a splinter of bone.

All the objections enumerated here may fairly be considered as trivial, if it can be shown that by the chiseling method a larger proportion of patients are cured than by the other method, or if it can be shown that, while the ultimate results are about the same in both methods, the patients get well more rapidly when the chisel is used than when the drill is employed.

Schwartze's statistics of 100 operations tell the following story:

Cured, 74 cases..............	74 per cent.;
Not cured, 6 cases...........	6 per cent.;
Died, 20 cases...............	20 per cent.

(In only one of the fatal cases could death be attributed to the operation itself.)

In my own cases (24 operations) the results were as follows:

Cured, 17 cases......	nearly 71 per cent.;
Not cured, 3 cases.........	12½ per cent.;
Died, 4 cases........	nearly 17 per cent.

(Death was not due in any of these cases to the direct effects of the operation.)

So far as it is legitimate to compare the results obtained in a small number of operations with those secured in a much larger series of cases, we may draw the inference that the drilling method furnishes as successful results as that by means of chisels.

If we compare the two percentages of "cases not cured," the chiseling method seems to furnish better results than does that in which the drill is used (6 per cent. of all cases in the former method, 12½ per cent. in the latter). I am convinced, however, that a comparison of the two methods, so far as these particular statistics are concerned, is valueless. An illustration or two will suffice to show this. In one of my "not-cured" cases it was ascertained—subsequently to the operation—that the pre-existing sinus in the mastoid process led far upward and inward into the cranial cavity. If this fact had been known at an earlier date, the uselessness of any operative interference short of excision of a large part of the temporal bone would have been apparent. In a second case, which is included in this category of "not-cured" cases, because the pre-existing fistula in the external auditory canal failed to heal after the operation, it would have been necessary to remove a great deal of the upper bony wall of the external auditory canal in order to reach the seat of the caries. This, of course, was not contemplated in the operation. So far as the mastoid process itself was involved, this case should properly be counted among the "cured," inasmuch as the external wound healed as early as on the sixteenth day, and complete and permanent relief from pain was afforded. In the third case included in this category the patient passed from under my observation at the end of thirteen months, and I am unable to state the ultimate result.

Finally, if we compare the two methods as regards the average length of time required in effecting a cure, we shall find that the drilling method does not suffer by the comparison. According to Schwartze's own estimates, the average duration of the after-treatment, reckoned from the date of the operation to the time when the external wound healed and the discharge from the ear ceased, was about eight months. In the acute cases alone the average duration of the after-treatment was about three months. In five of his cases the after-treatment was completed in four weeks.

In my own cases the average duration of the after-treatment in the successful cases was forty days. In my first series of sixteen operations I frequently carried the drill down to the vicinity of the antrum, but not actually into this cavity, and therefore did not establish as thorough drainage as would have been secured if the more perfect operation had been performed. In this series of cases the average duration of the after-treatment in the successful cases was forty-four days. In the last series of eight cases my aim was always to reach the antrum, and to establish an opening into it of not less than 4 mm. in diameter, and in this series the average duration of the after-treatment in the successful cases was only thirty-four days.

In the light of these facts I believe that I am justified in maintaining that in the ultimate results obtained by the two methods there is nothing to warrant the statement that chisels or gouges are greatly to be preferred to the drill in establishing an artificial opening in the mastoid process.

In a previous part of this paper I made the remark that the extensive destruction of bone-tissue necessitated by the chiseling operation materially delayed the final healing of the wound. While this is probably true, I am disposed to believe that a more plausible reason exists why the final healing took place so much later, on the average, in Schwartze's cases than in mine. I refer to the extraordinarily thorough plan of after-treatment adopted by Schwartze. The following condensed *résumé* will convey some idea of the complicated character of these therapeutic procedures. Schwartze recommends, in the first place, that a drainage-tube should be inserted in the artificial bony canal immediately after the operation. After each dressing of the wound it is to be reintroduced. When the insertion of this larger tube becomes too painful, the so-called "lead nail" (*Bleinagel*), bent at a right angle and provided with a slit-like opening through which a piece of tape may be passed, is to be substituted for the drainage-tube. This little instrument is to be gradually reduced in size as time goes by, but it is not to be wholly removed until after the lapse of months. In speaking of the question, When shall the lead nail be permanently removed? Schwartze admits that this is a difficult matter to decide. He says that under no circumstances should it be removed until the discharge from the deeper parts of the ear shall have been reduced to an insignificant amount. All granulation processes in the auditory canal and middle ear must first have ceased, and all swelling of the soft parts of the external meatus must have disappeared. Finally, water injected through the Eustachian tube into the middle ear must continue for a considerable period of time to escape from the outer meatus in a perfectly clear state and without showing particles of bone-sand. In a matter like this, he says, we should hold fast to the general principle that it is better to keep the fistula open by artificial means for an unnecessarily long period of time than to remove the lead nail prematurely. "The former course never leads to any harm—in fact, it scarcely causes the patient any inconvenience after he has become accustomed to the presence of the nail, while the latter course may entirely frustrate the permanent good results of the operation."

Perhaps I may be mistaken, but it seems to me that a great deal of this interference might advantageously be dispensed with, to the gain of the patient in personal comfort and to the relief of the surgeon, who must necessarily spend many wearisome hours in carrying out these complicated measures. The two things aimed at in Schwartze's plan of after-treatment are the removal of every vestige of decomposing organic material (cheesy and foul pus, carious bone, etc.), and the maintenance of an unobstructed outlet for the discharge of pus and for the introduction of cleansing fluids. Theoretically, it would seem as if there could be no guarantee of safety unless Schwartze's plan were carried out in all its details; practically, I believe that it has been shown that fully as good results may be looked for from the adoption—in all but the exceptional cases to which I have already referred—of the much less perfect antiseptic method which I have been in the habit of following. This method, in brief, is as follows: After a satisfactory artificial opening has been established in the bone, I cut out, by means of a small bone-gouge, a small channel in the surface of the bone from the bottom of the fleshy wound to a point in the artificial bony channel, fully one quarter of an inch distant from the outer surface of the mastoid process. The external wound, it will be remembered, is not directly over the spot where the opening is made in the bone. As a consequence, the anterior lip of the wound, when left to itself, slides backward such a distance as to cover up entirely the mouth of the artificial sinus. By cutting out a shelving gulley, such as I have described, we shall remove every obstacle to the free escape of fluids from the artificial channel in the bone, and at the same time we shall leave all the bony support that is necessary to prevent the formation of a depressed scar. This gulley serves another purpose—it plays the part of a director along which the end of the nozzle of our irrigating instrument may be conducted surely, and with the minimum amount of discomfort to the patient, into the artificial sinus; and, if at any time there is reason to believe that the artificial channel in the bone is obstructed, it is a simple matter, by means of this gulley, to pass a curved probe into it and overcome the obstructions. In the next place, in determining when I shall abstain from further irrigating procedures, I am guided by the following considerations: The chief danger of septic poisoning exists during the first twenty-four to forty-eight hours following the operation. The divided blood-vessels and lymphatics in the substance of the bone are still gaping, and more or less decomposing pus, etc., is just at that time particularly likely to come in contact with them. Antiseptic washings of all these parts are therefore specially called for during the first forty-eight hours. To be on the safe side, I generally keep up the irrigations (bichloride-of-mercury solution, 1 to 2,000 or 3,000) until the fourth or fifth day. By that time the processes of granulation and suppuration are thoroughly established in the injured bone, and, as it seems to me, the danger of septicæmia is practically over.

The histories of the cases on which these remarks are based are given here in the briefest possible outlines. The first series of sixteen cases has already been published at somewhat greater length in my treatise on ear diseases, but of the last eight cases, all of which occurred in private practice, only one has previously been reported. They are arranged in the order of their occurrence.

Case I.—Female, aged forty-seven. April 8, 1871. An acute purulent inflammation of the right middle ear since the latter part of the previous December. On April 1st the discharge diminished in quantity, the ear became painful, and there was occasional vomiting, with slight delirium. On examination, I found that the external auditory canal was closed by œdematous swelling of its walls, and that the pus was being discharged chiefly through the Eustachian tube. Wilde's incision; poultices.

April 18th.—Comparative freedom from pain since last date. Discharge from meatus re-established.

June 5th.—Occasional attacks of pain since last date. Severe attack the preceding night. Mastoid tenderness. Two leeches applied.

15th.—Steady increase of pain despite the application of leeches on several occasions.

16th.—Sinus discovered leading from meatus upward and backward into mastoid cells. Bone perforated with drill at usual spot. No pus found. One probe introduced into opening in the meatus encounters another introduced into the opening made by the drill.

Rapid improvement followed this operation. On July 27th it was found that the discharge from the meatus had ceased, that no trace of a sinus could be discovered in this canal, and that the external wound had healed.

Case II.—Female, aged sixty-two. July 10, 1872. Nine weeks previously patient began to suffer from pain in and behind the left ear and extending over the entire left side of the head. For two full days the pain was severe. After that a steady, dull aching remained, with tenderness on pressure behind the ear. About two weeks before she visited the infirmary the acute pain returned and continued, with occasional remissions, up to the time of her visit. On examination, the meatus was found nearly closed by a falling forward of the posterior cutaneous wall. Membrana tympani invisible. No appreciable tenderness in the meatus. No discharge. Tenderness over the mastoid process, and also over the lower part of the parietal bone. Incision of the integuments and periosteum covering the mastoid process. No pus found.

July 13th.—Little or no relief afforded by the incision. To-day the auricle is pushed forward by a swelling behind the ear. Incision entirely healed. A second incision gave exit to about half an ounce of pus. No roughened bone or sinus discovered.

18th.—Comparative relief from pain until last night, when it again became severe. She refers it to the mastoid process, the top and back of the head. The meatus is less swollen and the membrana tympani can now be seen. It is entire, but of a very tough, opaque, tendinous appearance. Eustachian tube open. The entrance of air is accompanied by râles. No brain symptoms. The mastoid process perforated with a conical drill. The outer surface of the bone found to be in every respect perfectly sound. At a depth of about one fifth of an inch pus was found filling a cavity of about the size of a filbert. Pus removed with pledgets of cotton, and outer orifice of the cavity enlarged sufficiently to admit the end of my little finger.

19th.—Patient much relieved by the operation, but she still complains of soreness over the back and side of the head. Pressure over the left occipital and parietal regions produces pain.

20th.—Severe pain in the head, behind the mastoid process. Appetite only moderately good. Is losing strength. Stimulus ordered. Wound discharging freely.

22d.—Still severe pain behind the mastoid process. Skull trephined about three fourths of an inch behind the mastoid process, at the point of greatest tenderness. The outer surface of the bone appeared to be perfectly healthy; but, on withdrawing the trephine, after sawing through the outer table, the circular track was found to be filled with healthy pus, which had welled up from the intervening cancellous diploë. No appreciable softening of the bone. The removal of the inner button of bone exposed to view a tense, deep-red dura mater, but no pus. The subsequent oozing of venous blood from the ruptured branchlets was readily checked by laying a pledget of cotton in the circular opening.

23d, 11 A. M.—Patient slept a part of the night. This morning she has considerable heat of skin. Pulse 100 and feeble. Less pain in the head; 8 P. M., pulse 106 and feeble; intellect perfectly clear; the discharge from the mastoid process appears to have nearly ceased; vomited once this evening.

24th, noon.—Patient is evidently sinking; pulse 110 and very feeble; respirations 44; no râles over anterior and lateral portions of the chest; intellect still clear, but she has not sufficient strength to speak in an audible tone when answering my questions. She died on the 26th, apparently from exhaustion.

Post-mortem examination refused by the friends.

Case III.—Male, aged twenty-one. September 4, 1872. Acute inflammation of one ear twelve weeks previously, as a result of bathing. Two weeks later the ear began to discharge. Four days previously the discharge had ceased and pain had developed in the mastoid region, which had also become tender to the touch. At present the skin covering this bony process is red, tender, and swollen. There is marked prolapse of the posterior cutaneous wall of the external auditory canal, concealing the membrana tympani from view. Bone perforated with the drill, abscess found at a slight depth, external opening then enlarged with a cone-shaped reamer, and cavity in bone thoroughly cleansed. Patient was not seen again, but he wrote during the following November that the external wound had healed within ten days after the operation, and that he had been perfectly well since then in every respect.

Case IV.—Boy, aged eleven, of consumptive appearance. September 11, 1872. Acute inflammation of the left middle ear, with purulent discharge, dating back one week. To-day the discharge ceased, and the pain in the ear became more severe. Pulse 108, and feeble. Tenderness on pressure, and œdema of the left mastoid integuments. External auditory canal closed by the swollen condition of its cutaneous walls. Operation performed with drill, and mastoid cells reached a short distance beneath the outer surface of the bone. No pus found. Marked congestion of the mucous membrane lining the cells. The thin, bony septa yielded readily to the pressure of a steel director.

September 13th.—Entire freedom from pain. Discharge from the meatus has returned. Ordered iron and cinchona-bark.

16th.—Continued improvement.

21st.—Patient has night-sweats and hurried breathing.

Although I never heard from this patient subsequently, I have very little doubt that he must have succumbed to pulmonary phthisis, superinduced, or at least hastened, by the profuse otorrhœa (both from the meatus and from the external wound).

Case V.—Male, aged fifty-six. October 12, 1872. Acute purulent inflammation of the left middle ear in early manhood, leaving a perforated membrana tympani. Last August an acute inflammation again developed in the same ear, and was characterized by unusually severe pain. Discharge intermittent. Toward the end of August he had a rigor, followed by a return of the pain, by discharge, and fever. Pain very severe, and involving mastoid region, articulation of jaw, and entire side of the head. Pain lasted for about ten days. There was tenderness over the mastoid process. Auricle was dislocated forward. Then the acute symptoms abated, and patient remained comparatively free from pain until about October 5th. Pain then returned, and was once more quite severe. No evidences of acute inflammation found on examination of the deeper parts of the ear. Mastoid integuments, however, were still tender on pressure and œdematous. Operation performed with drill. Bone found to be compact to a depth of three fifths of an inch. Wall of lateral sinus exposed, thus showing that the drill had been applied too far backward.

October 13th.—Patient passed a comfortable night, without pain.

14th.—Pain has returned again. Operation performed a second time, the drill being applied at a point nearer to the auditory canal. Mastoid cells found to be small, and intervening septa hard and thick. No pus found.

November 14th.—External wound has not quite healed. Discharge from meatus has ceased. There has been no return of the pain since the operation.

(I afterward learned that the external wound healed soon after he returned to his home, and that the cure had proved to be a permanent one.)

Case VI.—Female, aged thirty-six. January 15, 1873. About one week previously she contracted an acute inflammation of the right middle ear. Pain severe, and only partially relieved on the appearance of a purulent otorrhœa at the end of twenty-four hours. Pain soon returned, and increased in severity until it became almost intolerable. It involved the entire side of the head, and was accompanied by tenderness of soft parts in front of and behind the ear. On examination, the external auditory canal was found to be closed by œdematous swelling of its cutaneous walls. Tenderness and moderate swelling of mastoid integuments. Wilde's incision; poultices.

January 16th.—Patient has experienced no relief from the incision, and is evidently in great suffering. Mastoid bone perforated with the drill to a depth of half an inch. Cells few in number, and septa thick and strong. No pus found. Poultices to be used freely.

17th.—Pain is much less severe, and patient feels better in every respect. Appetite has returned.

22d.—Continued improvement.

29th.—Entire freedom from pain. Scarcely any discharge from the external auditory canal. External wound healing rapidly. Discharge from meatus ceased on February 10th, and the external wound healed on or about February 15th.

Case VII.—Female, aged twenty-six. February 12, 1873. About ten days previously she contracted an acute inflammation of the left middle ear, followed by discharge from the auditory canal. Pain, although not severe, still continues. Incision of red and swollen membrana tympani.

March 1st.—For ten days subsequently to the paracentesis patient remained free from pain. Then, however, it returned, and was referred chiefly to the mastoid region. To-day she refused to have the bone perforated, but consented to have a Wilde's incision made.

12th.—Only temporary relief followed the incision, and patient now consents to having the bone perforated. Instead of making the opening at the usual spot, I perforated the bone near the tip of the process, with the idea of securing better drainage from an opening in this lower portion of the system of air-cells. No pus was found. Facial erysipelas developed, but ran a comparatively mild course.

On March 17th the pain again became acute in the mastoid region, and I then made a second opening in the mastoid process at the point usually selected. At a slight depth a cavity containing pus was reached.

On the 29th of March, when the patient returned to her home, the discharge from the external auditory canal had entirely ceased. She had been free from all pain for several days, and the external wound had nearly healed. While I did not see her again, I have no doubt that final and complete healing of the latter took place within a week or ten days subsequently.

Case VIII.—Male, aged twenty-three. March 19, 1873. From this date to April 3d patient was under treatment for an otitis media mucosa on the left side. The treatment adopted—the injection of a very weak solution of alum through an artificial opening in the drum-membrane—set up a severe inflammation of the middle ear.

April 4th.—Patient in great suffering. The pain developed about twelve hours after the injection of the alum solution, and soon became severe. From the first the patient referred the pain to the mastoid region and to that lying just above the auricle. Tenderness on pressure found on examination. An incision through the bulging posterior half of the drum-membrane afforded escape to pus, and mitigated the pain. Five leeches were also applied behind and in front of the ear.

From this time to April 13th comparative freedom from pain. There was, however, a constant purulent discharge from the ear, and the mastoid tenderness persisted.

16th.—Steady increase in pain since the 13th. Wilde's incision; poultices.

19th.—Only temporary relief from the incision. Temperature 101·5° F., pulse 92, and weak; motion of jaws painful; meatus slit-shaped vertically. Bone perforated with drill to a depth of three fifths of an inch. No pus found.

The operation was not followed by marked relief, as is generally the case. The pain did not begin to diminish noticeably until on the 22d, and on the 29th it was again severe for a short time. After that date the progress toward recovery was rapid.

On June 1st I found that the discharge from the auditory canal had ceased and that the outer wound had entirely healed.

Case IX.—Male, aged thirty-nine. October 22, 1873. Acute inflammation of the left middle ear in previous July, after sea-bathing. An attack of convulsions on the seventh or eighth day. At the end of four weeks a large abscess developed in the mastoid region, and broke spontaneously. At no time was there any discharge from the external auditory canal. After the rupture of the abscess the patient continued to experience a great deal of pain, chiefly in the left temple. He also had frequent attacks of dizziness. On examination, the membrana tympani and adjacent parts were found to be almost free from evidences of inflammation. Behind the ear there was a small fistulous opening leading to a bone sinus in the upper part of the mastoid process.

Operation performed on October 23d. Drill was placed over the orifice of the sinus and was carried to the depth of three fifths of an inch. No pus found.

January 15, 1874.—A fistulous opening still remains behind the left ear. From the direction taken by the probe, and from the distance which it traverses in its upward and inward course, there can be very little doubt that the source of the pus is not in the mastoid process, but at some spot within the cranial cavity—probably a localized caries of the cerebral aspect of the temporal bone. So far as pain is concerned, the patient has obtained the desired relief from the operation, but, so far as the fundamental disease is concerned, he seems to be in precisely the same condition now as he was before the artificial opening was made. I do not know what ultimately became of the patient, as he declined to submit to any further treatment.

Case X.—Male, aged thirty. February 7, 1874. Fifteen months ago patient was attacked with a severe pain in the right ear. The inflammation soon spread to the mastoid cells, an abscess formed behind the ear, and at the end of the eighth week it broke spontaneously, affording him relief from his prolonged suffering. The fistulous opening which remained after the abscess broke did not heal up until six months later. A purulent discharge from the ear has been present from almost the beginning of the attack, and is now occasionally tinged with blood. Two days ago the pain returned. It is confined chiefly to the mastoid region. On examination, the external auditory canal is found to be narrowed (slit-shaped almost vertically) to such an extent that the deeper parts can not be seen. The discharge consists of pus tinged with blood. No tenderness on pressure over the mastoid process or in front of the tragus. Three leeches applied to the mastoid region.

May 23d.—The pain was relieved by the leeches, and patient went to the country for a few weeks. Two days ago the pain returned, and the discharge from the ear became more abundant. The pain is referred to the right temple. Warm douche to be used freely.

27th.—Pain continues. Blister to be applied in front of the ear.

June 3d.—Entirely free from pain.

July 9th.—During the past three weeks he has again suffered a great deal from pain involving the entire right side of the head. Diarrhœa has set in, and a fistulous opening has again established itself behind the ear. The discharge of pus from this opening is quite abundant, and there is no swelling or tenderness in the vicinity. A large polypoid growth fills the external auditory canal. After removing this mass with the snare, I discovered, by aid of the probe, that the inner and posterior portion of the meatus (vicinity of antrum) was in a carious condition. The probe, introduced into the sinus behind the ear, encountered denuded bone, and engaged itself in a small opening in the mastoid process which led into a cavity containing loose fragments of bone. The patient having been etherized, I made a free incision through the skin covering the mastoid process, enlarged the opening in the bone by means of the larger drill, made a new opening a short distance above the old one, and then broke down the intervening bridge of bone. A large and sharply defined cavity, filled with fluid and cheesy pus and several fragments of bone, was found in the unusually large mastoid process. The highest point of the cavity was fully three fourths of an inch above the level of the upper wall of the meatus. It was estimated that the cavity contained at least a drachm of pus. The largest fragment of loose bone removed measured two thirds of an inch in length, and consisted evidently of the peculiar honey-combed structure of the mastoid cells.

10th.—Complete freedom from pain. Appetite good.

11th. — Moderate swelling of the parts surrounding the wound. Patient doing well in every respect.

22d.—Since the last note patient has complained very much of pain in the lower jaw on the right side. There is no redness or swelling in this region, but the jaw on this side is everywhere tender to the touch. On exploring the meatus, I discovered that it was nearly closed by a collection of pus lying between the upper and posterior bony wall and the skin of the canal. Near the stump of the polypus (removed July 9th) I discovered a small opening in the skin which was apparently the only outlet for this collection of pus. Upon enlarging this opening I was able to press out nearly half a drachm of pus, and one small fragment of exfoliated bone; other small fragments could be felt with the probe, but no attempt was made to remove them.

25th.—Great improvement since last note. Patient eats and sleeps well and is entirely free from pain. On wiping out the orifice of the ear he occasionally finds a small fragment of bone.

September 20th.—I have not seen the patient since the last note, but find him to-day in a very low state. He has no pain in or about the ear, but complains of a "headache" which comes on every afternoon. His general appearance is that of a man in the last stage of consumption. The probe can now be passed, through the opening in the posterior and upper wall of the external auditory canal, upward and backward a distance of fully two inches from the outer orifice, without encountering any resistance. The presence of smaller and larger fragments of bone can be readily distinguished as the probe is pushed along the fistulous track. Sinus in the mastoid region (behind the auricle) still open.

I did not see the patient subsequently, but am confident that he must have died very soon after I saw him.

Case XI.—Female, aged twenty-nine. February 10, 1875. Discharge from left ear since childhood. Of late, considerable pain in the region of the ear and in the left eye. Examination revealed the presence of granulation tissue in the left meatus. It sprang from the entrance of a sinus in the bone, posteriorly and near the middle part of the canal. Denuded and crumbling bone felt with probe. Slight tenderness over the lower portion of mastoid process, and also in vicinity of the occipital protuberance. Operation performed on February 13th. Drill applied at the usual spot and carried to a depth of three fifths of an inch. No pus found.

February 14th.—Marked relief from pain.

16th.—Tenderness and swelling of the soft parts in front of and above the auricle. Temperature nearly normal.

20th.—Prolonged attack of syncope since last date. Temperature varies from 98·5° to 99·5° F. Pain in the head is nearly constant. Second removal of polypoid granulations.

24th.—Two convulsive seizures to-day. Pain referred chiefly to the left eye. Her answers to questions are at times almost unintelligible. Profuse sweating. Occasional vomiting.

26th.—She is so restless now that force has to be employed to prevent her from leaving her bed. Constant delirium. Right strabismus has developed, and the right upper lid droops. Temperature has risen to 101° F. Death occurred during the night. No post-mortem examination was allowed, but by means of a curved probe I ascertained that an ample communication existed between the middle ear and the cranial cavity. The patient's death was undoubtedly due to abscess of the brain, the result of caries of the antrum, roof of tympanum, and adjacent bony structures.

Case XII.—Male, aged twenty-eight. August 25, 1875. Ten days previously he contracted an acute inflammation of the right ear, as a result of bathing in salt water. The establishment of a discharge from the ear had afforded little or no relief from the pain. Membrana tympani red, swollen, and perforated; mastoid integuments tender on pressure, swollen, and congested. The latter were freely incised.

September 15th.—The Wilde's incision afforded marked relief from pain, but the external wound still remains open at one point; there is still tenderness, and an abundant otorrhœa continues.

October 7th.—Coincidently with a diminution in the amount of the discharge during the past few days, the pain has increased and is now quite severe. Bone perforated with drill and a large cavity found at a slight depth.

16th.—A fluctuating swelling having developed midway between the mastoid process and the occipital protuberance, it was incised to-day and pus evacuated. This pus had collected between the dura mater and the bone.

November 24th.—Both external wounds are still open, and both afford escape to pus. By a deep incision I converted these two small openings into a single large open wound. The periosteum was found to be separated from the bone throughout quite a large area.

December 15th.—For the first time since the original operation, the patient has remained entirely free from pain for several consecutive days.

January 15th.—External wound has healed perfectly, and patient is again well in every respect.

Case XIII. — Female, aged thirty-five. March 17, 1876. Acute inflammation of the left middle ear three weeks previously. Profuse otorrhœa followed. Steady increase of pain, which now involves entire side of head. Mastoid integuments tender, but not swollen nor red. Prolapsed condition of the upper and posterior cutaneous wall of the external auditory canal. Wilde's incision.

March 24th.—Sinus found in the bone at the bottom of the external wound. Bone perforated with drill. Free hæmorrhage prevented me from ascertaining whether pus was reached or not. The antrum was not reached. The pain, however, was relieved, and patient continued to improve up to the middle of April. About that time an acute polyarthritis set in, and patient was severely ill for about two weeks. On the 11th of May she left the city, and about one year later I learned that the ear gave her no further trouble, and that she had entirely recovered her health.

Case XIV.—Male, aged fifty-three. March 29, 1876. Acute inflammation of right middle ear from exposure to wet and cold. Steady increase of the pain. Mastoid integuments tender; five leeches applied.

April 7th. — Pain only temporarily relieved; now severe again. Redness and swelling of mastoid integuments. Wilde's incision.

19th.—Perforation of bone with drill. Cavity found containing sequestra of bone and thick pus.

22d.—Decided relief from pain.

May 10th. — Discharge from external auditory canal has ceased.

The patient remained under observation, at long intervals, until May, 1877. At that date the fistulous opening seemed to be on the eve of healing.

Case XV.—Female, aged fifty. January 5, 1874. An acute inflammation of the left middle ear had developed three weeks previously. Leeches had afforded only partial relief from pain, and the physician in attendance accordingly made a Wilde's incision.

January 15th. — Bone perforated with drill. From the smallness of the external wound and the copiousness of the hæmorrhage, I was unable to ascertain whether the mastoid cells contained pus or not. Apparently the antrum was not reached, although the drill penetrated to a depth of half an inch.

While the operation gave the patient entire relief from pain for a period of five weeks, it then returned and continued to distress her, at intervals, for several weeks. A very free paracentesis of the membrana tympani, on March 12th, at last gave her permanent relief. By the 25th of March the discharge from the ear had ceased, the external wound had healed, and patient felt once more perfectly well.

Case XVI.—Male, aged thirty-five. October 29, 1877. Nine weeks previously he contracted an acute inflammation of the right middle ear. The pain gradually subsided, but it returned again about a week previous to the time when I first saw him. Constant discharge. Examination shows the presence of a large fleshy mass at inner end of the canal. Tenderness on pressure over the mastoid process. Wilde's incision and the removal of the greater part of the fleshy mass afforded decided relief from the pain.

November 24th.—Pain is again on the increase.

29th. — Continued and increasing pain. Operation performed. Drill carried to a depth of nearly three quarters of an inch. Cells seemed to be of moderate size and healthy. The septa were quite thick. At the bottom of this opening the probe encountered a pad of soft tissue—probably granulation tissue filling the antrum. No pus found. By probing through the sinus in the vicinity of Schrapnell's membrane, it was learned that the lateral and lower bony edge of the entrance to the antrum was in a denuded and roughened condition.

December 29th.—The operation having failed to afford more than temporary relief, and the granulation growth in the canal having attained sufficient size and firmness of texture to interfere with the free escape of pus from the middle ear, the patient was again anæsthetized and the granulation growth thoroughly excised.

From this date forward the patient made a rapid and permanent recovery, and by the 15th of January both the external wound and the perforation in the drum-membrane had healed.

Case XVII.—Male, aged fourteen. April 5, 1883. R. ot. med. pur. chron., originating five years previously in an attack of scarlet fever. Discharge intermittent. Pain at times severe since three weeks previously. Temperature 104·5° F. Patient drowsy and apathetic. Examination shows that a sinus in vicinity of Schrapnell's membrane has become blocked or obstructed, and, as a consequence, the discharge is very scanty. Redness and swelling of inner half of osseous canal.

Drill used. Pus found at a depth of three fifths of an inch. Artificial opening in bone syringed with carbolated water daily for several days. On the fifth day after the operation the patient had a severe attack of malarial intermittent fever, which finally yielded to quinine (forty grains per day, for two or three days; afterward twenty-five grains daily for several days). External wound closed on the twentieth day after the operation. Then, a few days later, it reopened and discharged a few drops of opaque serum. After that it remained permanently healed until about one year later; and again, three years later, when, after catching cold, a small abscess developed in the cicatrix, broke, discharged a little pus, and then the parts again resumed a normal condition. The discharge from the meatus ceased about ten weeks after the operation. During the three and a half years which have elapsed since then the patient has, with the exceptions mentioned, been entirely free from all ear trouble.

Case XVIII.—Female, aged fifteen. May 2, 1883. Ot. med. pur. chron. of right side. Pain in affected ear for several weeks past, and for nearly a week it has been severe. Marked prolapse of posterior and upper cutaneous wall of canal. Incision afforded escape only to pus, without cheesy material. System of most careful douching inaugurated. Little or no relief from the pain. No redness, swelling, or tenderness of mastoid integuments, owing, undoubtedly, to sclerosed condition of mastoid bone.

Operation with drill May 8th. Bone hard, but not excessively so. Antrum reached at a depth of about half an inch. Final opening into antrum only about 2 mm. in diameter. Rich, creamy pus welled up through this opening in the bone when patient vomited. Carbolated water used in washing out antrum; later on, boric acid (saturated solution) was used once daily for a few days.

Already, on the day following that of the operation, patient was found to be free from pain. On the fifth day part of the fluid injected into the antrum escaped by way of the external auditory canal. On the eleventh day the antrum injections were discontinued. External wound closed permanently about July 15th. Sequestrum of bone removed from meatus on July 19th. Final cessation of the otorrhœa during last week of November, after a lapse of six months from the date of the operation.

Case XIX.—Male, aged twenty. May 14, 1883. Left ear gave no trouble until eight weeks previously, when it began to ache. There were also tinnitus and throbbing. Pain and other symptoms have been intermittent until within past few days, when parts behind the affected ear became tender and swollen, and the pain became severe. Examination shows redness and infiltration of the membrana tympani without bulging; prolapse of posterior superior cutaneous wall, near the drum-membrane. Redness, tenderness, and swelling of mastoid integuments. Paracentesis of membrana tympani and Wilde's incision, with stuffing of wound.

May 20th.—Patient entirely free from pain. External wound has nearly closed, the tent having been removed a day or two ago.

25th.—No return of pain. No otorrhœa. Membrana tympani healed. External wound has healed, and there is scarcely any tenderness left.

June 5th.—Dancing-party last evening. Pain in ear returned, and has been severe throughout the night and morning. Three leeches applied.

6th.—Pain entirely relieved. Drum-membrane has lost all evidences of congestion. Still a little swelling of mastoid integuments.

July 9th.—Patient has been very comfortable in the region of his ear since last date until two days ago. Then pain became severe behind the ear, and marked redness and swelling developed in this region.

10th.—Integuments incised behind ear. Pus evacuated from abscess below mastoid process. No sinus discoverable on examination of surface of the bone. Drill reached pus at a depth of one fourth of an inch. Large abscess, occupying entire body of mastoid process. No traces left of the bony septa. Cavity washed with carbolized water. Simple dressings. Pain speedily relieved. No relapse. External wound healed about September 1st, after the lapse of about seven weeks.

Two years later he caught a cold in the head, and a small abscess formed in the old cicatrix. A sinus led from this, apparently, to the old opening in the bone. It healed again in the course of a few days.

Case XX.—Male, aged twenty-seven. July 20, 1883. Pain in right ear following salt-water bathing six days previously. During past four days pain has been constant and severe, particularly so during the night previous. Examination shows that the walls of the right meatus are red and somewhat swollen. View of deeper parts very unsatisfactory, by reason of three or four small exostoses which block the way. Patient spits blood, which seems to come from the ear. Watch heard only on contact. Pulse 84, temperature 100° F. Three leeches applied. Warm douche. Poultices. Patient advised to remain in bed.

July 24th.—Very little, if any, relief from the use of leeches, etc. Mastoid integuments now red and swollen. Auricle slightly dislocated forward. Meatus entirely closed by swelling of its walls. Wilde's incision, followed by poulticing.

25th.—Pain not quite so severe. Temperature 101·2° F., pulse 72. Poultices to be continued.

26th.—Pain in and around the ear severe during the night. This A. M. he has much less pain. There is now, however, a constant pulsation deep down in the ear. Pulse 88, temperature 100·8° F. Poultices to be continued.

27th.—Pain again severe.

29th.—Pain continues. To-day there is swelling of the soft parts in the temporal region. Tenderness and swelling behind the ear are still present, and have perhaps increased. Pulse 94, temperature 100·6° F. Mastoid integuments incised, giving escape to pus which seemed to be forming outside of the periosteum. Drill carried to a depth of three fifths of an inch, opening consecutively into two large cells. No pus found.

30th.—Patient slept well. Pain has entirely disappeared. Temperature normal. External wound healed on or about August 20th. No relapse of any kind subsequently.

Case XXI.—Female, aged ten. September, 1883. Chronic otitis media purulenta, with foul discharge through fistulous opening above drum-membrane anteriorly. Probe passes in freely to a depth of several millimetres. No mastoid symptoms until during the present month. Otorrhœa ceased, and fluctuating swelling developed behind the ear. Incision gave escape to an ounce of fœtid pus. Drill applied at the usual spot. No evidence of bone softening or fistulous opening. Pus-cavity reached at a depth of one third inch. Probe passed to a depth of one inch before meeting any resistance. Syringing of this cavity brought away a large quantity of cheesy and flaky material that had a very foul odor. Syringing continued until water escaped clear. Much of the water and foul material escaped from the external auditory canal during the syringing. Simple dressings.

The following day I found very marked œdema of the left eyelids and temple of a slightly bluish hue. Child rebellious, and no further washings of the bone cavity were permitted.

On the third day after the operation the œdema had almost entirely disappeared. No pain. No treatment permitted except simple dressings and washing of the meatus.

Sixteen days after the operation the wound had healed, and the otorrhœa had ceased.

A few months later she had a relapse. Abscess broke externally. Otorrhœa returned and has continued interruptedly ever since.

Case XXII.—Female, aged six. November 17, 1883. Acute attack of inflammation of the right middle ear two weeks previously. Yesterday the discharge ceased and the parts behind and above the ear rapidly became swollen. Child very pale. No appetite. Temperature 100·8° F. Marked tenderness behind and above the ear. Paracentesis of the inflamed drum-membrane performed. The use of douche and poultices advised.

November 19th.—Child complains less of pain. Temperature 101° F. Discharge appeared soon after the paracentesis, but it has now ceased again. Otherwise no material change seems to have taken place in her condition. Poultices and douche to be continued.

23d.—There is now quite a large fluctuating swelling behind the ear. Temperature 101° F. Pain only at times. Incision evacuated about half an ounce of thick pus, which seemed to lie outside of the periosteum. Drill applied at the usual spot, and, at a depth of half an inch, three or four large cells were broken into. No pus seen. Wound in bone douched with carbolized water.

December 6th.—Rapid recovery of strength and appetite since the operation. No return of the pain. No discharge from the meatus. External wound has permanently healed (thirteen days after operation), and the membrana tympani has almost regained a normal appearance.

Case XXIII.—Male, aged thirteen. February 23, 1885. Sharp earache in right ear ten days previously, followed by a profuse discharge. Comparatively little pain since then, but the discharge continues to be profuse. Examination shows that the pus is escaping, not through the membrana tympani proper, but through a pouting orifice in the upper cutaneous wall, a short distance from the drum-membrane. Slight tenderness behind the ear. Temperature, 100·5° F. Douche to be used several times daily with a saturated solution of boric acid.

March 1st.—At noon to-day he had a slight chill; temperature 104° F.; pulse 92. The chill was followed by a noticeable increase in the amount of discharge. No increase in the mastoid tenderness.

2d.—Persistent vomiting and retching last evening. Mastoid tenderness more marked to-day; temperature 102·4° F.

3d.—Marked diminution yesterday in the amount of the discharge. He has taken fifteen grains of quinine daily during the past two days. Yesterday he had a profuse sweat. This morning he began to complain of pain in the metacarpo-phalangeal joint of the left middle finger. With the pain was associated a small, well-defined red spot, which gradually spread and soon presented all the appearances of an acute inflammation of the joint. The least movement caused great pain in the part. On inquiry, I ascertained that he had never before had anything like rheumatism. Nevertheless, I put him on ten-grain doses of salicylate of soda every four hours.

4th.—The redness and swelling have not extended appreciably beyond the limits of the knuckle. The pain in the part is already beginning to subside.

6th.—Patient passed a bad night, the pain in the right side of the head being severe. It is referred chiefly to the right temple. No redness or œdema of mastoid integuments, but still some tenderness over the upper portion. Caliber of the external auditory canal markedly reduced in size. Discharge still profuse, and now at times a little bloody. Perforation of bone advised.

7th.—He is again feeling better; temperature normal. Patient given ether, and drill applied at usual spot. At a depth of half an inch the bone appeared to be noticeably softened. On breaking into the antrum, creamy pus welled up to the surface of the bone. In chiseling out the drainage groove I opened into some of the more superficial cells, which were found full of thick pus. In washing out the antrum I used an unusually strong solution of bichloride of mercury (1 to 1,000), and, as a good deal of it passed through the Eustachian tube into the pharynx, it gave him not a little discomfort afterward for at least an hour.

Patient made a rapid and complete recovery, the discharge from the meatus ceasing entirely on March 9th, and the external wound healing permanently on or about April 1st.

CASE XXIV.—Male, aged thirteen. January 20, 1886. Contracted an acute inflammation of the left middle ear about December 20th last. Pain, discharge from the ear, and deafness. From that time to the present he has had attacks of pain in the affected ear, alternating with periods of comparative comfort. Recently, however, the pain has greatly increased, and he has now taken to his bed. More or less "stiff neck" of late; temperature has been above normal (101° F.+); paracentesis—the perforation being of too small size—afforded only temporary relief. Last night the pain was severe. To-day he shows decided signs of drowsiness. Examination reveals a profuse creamy discharge from the external auditory canal. Great narrowing of osseous part of canal. Walls red and swollen. Tenderness on pressure over mastoid bone, especially over the lower part. Moderate œdema and redness of skin. Tenderness along course of sterno-cleido-mastoid muscle.

Operation performed with drill. Cells found to be small and septa strong. Antrum reached at a depth of fully three fourths of an inch. Creamy pus welled up. Cavity washed out with a 1-to-3,000 solution of bichloride of mercury.

From the family physician I learned that the external wound did not heal until after the lapse of six or seven weeks. One or two fragments of bone came away. Afterward perfect healing of wound and of perforation in the membrana tympani followed.

SYDENHAM AND HAHNEMANN.*

By F. B. STEPHENSON, M. D.,
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THERE seems to be an idea abroad among the people of the United States that homœopathy has done a great deal to lessen the amount of drugs used by physicians in their care of the sick.

As bearing somewhat upon the question, let us see what is the testimony of the past in regard to two men who, in this connection, may be considered typical—Sydenham and Hahnemann.

By virtue of seniority, Sydenham may first claim our attention.

Thomas Sydenham was born in 1624; in 1663 he became a licentiate of the College of Physicians of London; he lived sixty-five years. There is no need to recount here what he has done for medicine; yet a comparison of his character with that of Hahnemann may be of interest.

John Brown calls Sydenham "the prince of practical physicians."[†] "Morton, Willis, Boerhaave, Gaubius, and Bordeu speak of him as second in sagacity to 'the divine Hippocrates' alone." Hippocrates says that the four qualities indispensable in every good physician are learning, sagacity, humanity, probity. Sydenham had these. Like Hippocrates, he had a power of keen, serious, patient, continuous, honest observation, so needful in order that facts may become science, and a native quickness of perception, so requisite in the intelligent practice of medicine. Sydenham found that nature alone often cured disease; sometimes a few simple remedies appeared to help.*

And now what do we find written concerning the founder of homœopathy?

Samuel Christian Friedrich Hahnemann was born in 1775;[†] he died in 1843. His works are well known. The following views of his character as a physician are given by professed homœopathists:

Hahnemann was a careful observer, but a theorizer rather than a correct and profound reasoner. He had his own system of pathology and of therapeutics. He taught that nature was a bad physician, but that drugs were the real curative agents provided by the beneficence of the Almighty. By the same style of logic may we not attribute disease to the ill-will of the Almighty?

Dr. Wyld, vice-president of the British Homœopathic Society, says that "the views expressed by Hahnemann are often extravagant and incorrect; that Hippocrates was right when he said some diseases are best treated by similars and some by contraries, and therefore it is unwise and incorrect to assume the title of homœopathist."[‡]

This system has no scientific recognition in the land of its origin. When a recent writer[#] says that this system "has revolutionized orthodox medicine," he seems not to know that the teachings of Hippocrates, of Sydenham, and of Locke[‖] could reach the minds of men by any other way than through the school of Hahnemann.

He continues "that many of our own men abjure the minute doses which served so well in the hands of Hahnemann and many of his earlier disciples"—a suggestive statement!

Persons have been heard to say that homœopathy has diminished doses, and caused the use of milder means in practice. Would not the truth be rather that the teachings of Sydenham, and of such as he, are having their perfect work—first with the doctors, and then in the minds of the people? Is it not reasonable to think that from the precepts of such men have come the present intelligent study of the natural history of disease and the rational practice based thereon?

There may be a similarity between the result of the work of Sydenham and his co-laborers and the result of the work of Hahnemann and his followers; but can we presume a logical sequence? Can any one say with reason that the liberty of the citizen in the American Union is a consequence of the extravagances of the French Revolution of 1789? Because a man and a child speak words that seem to be the same, does it follow that the child has taught those words to the man?

Even as other brave, good men have aided the renaissance of other arts of modern times, so Thomas Sydenham has caused, in great measure, the resurrection of the medical teaching that Hippocrates gave to the world.

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* Read before the U. S. Naval Medical Society.

[†] "Spare Hours," by John Brown, M. D

* Abercrombie, the Scottish Sydenham, deserves mention here as prominent among those who have done much to bring about a rational practice of the curative art.

[†] Sydenham's works were published in 1785.

[‡] London "Lancet," June 2, 1877.

[#] "Homœopathic Review," January, 1880.

[‖] "On the Conduct of the Understanding," by John Locke.

This great English apostle has not been without disciples. Both to him and to them is due our present form of rational medicine, imperfect though it be. They have shown the way, laid out the chart; but we of to-day have our own share of the work to do. It is in medicine as in sailing a ship; charts and rules may serve for general guidance, but when squalls or gales come—when shoals or breakers are seen—the pilot must have recourse to his own craft and courage.

The proper care of the sick must be by intelligence, not by routine. Let us first *ap*prehend, then we may *com*prehend; but not as a matter of course.

Cullen said "that there are more false facts than theories in medicine." Does not this hint at imperfect observation?

Radcliffe used to say that when young, he had fifty remedies for every disease; and when old, one remedy for fifty diseases.

Because many pills do the patient no apparent harm, it does not follow that they do him good.

It may be presumed that the teachings of Hahnemann did not influence Jean Jacques Rousseau, who wrote before the French Revolution of 1789. He was not a physician, but an observer, a thinker, a veritable philosopher. There is food for thought in the following translations from his work entitled "Émile, ou de l'éducation":

"The wise physician does not heedlessly give prescriptions at first sight, but studies, rather, the temperament of the patient before ordering any dose. He begins late to treat the case, but cures the sick one, while the physicians who are too hurried kill their patients."

"Live according to nature. Be patient, and flee the doctors. You will not avoid death, but you will feel it once only; whereas doctors will keep it every day before your unhappy mind; and their delusive art, instead of lengthening your days, will kill all enjoyment of them. I shall always ask, indeed, what real good medicine has done to men. It is true that some of those whom it cures would have died, but thousands that it kills would have lived."

"An ignorant or a bad man may bring happiness to one by making a hundred miserable. Fools (well-meaning persons) rush in where angels fear to tread. The wise physician knows when to withhold his hand. Let Nature act a long time before you interfere, lest you spoil her work. You answer that you do not wish to lose time. Do you not see that bad action is worse than none? Do good, but sin not; that is, refrain from doing harm."

These views are the apparent consequence of the practice of unwise physicians, or of bad men, whose actions thus have wide influence, reaching far beyond any particular case.

Rousseau continues: "In regard to the practice of medicine, men make the same sophisms as in regard to the search for truth. They always suppose that in treating the sick one cures them; and that in looking for the truth one finds it."

"The science that instructs and the art of medicine that cures are very good; but the science that deceives and the art of medicine that kills are very bad."

Sound modes of cure should be based on how things are, and on the way nature acts. The good in everything should be sought and seen—if it exists!

The best friend and the strongest ally of the wise physician is the *vis medicatrix naturæ*, although it may need aid, restraint, and careful guiding.

These various views of medical science and art may end with a few lines from an old English poet:

"Hold thy hand! health's dear maintainer;
Life perchance may burn the stronger:
Having substance to maintain her,
She untouched may last the longer.
When the artist goes about
To redress her flame, I doubt
Oftentimes he snuffs it out."—*Quarles.*

TWO CASES OF PUERPERAL SEPTICÆMIA

OCCURRING IN PRIVATE PRACTICE.

By STANLEY M. WARD, M. D.,
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A very casual reader of the obstetric literature, especially the periodical, of the last few years must have noticed the great amount of discussion antiseptic midwifery has undergone, and as a corollary the fever of the puerperal period likewise. Hardly a week passes without some contribution to the literature of both, and divers are the opinions expressed. The strict believer in antisepsis will take nothing less than, even under ordinary circumstances, no communication with dissecting- or post-mortem room, no attendance in cases of any diseases deemed even feebly contagious, hands cleansed and washed in some germicide solution, but few vaginal examinations, and those with antiseptic precautions, and, finally, either a suppository of iodoform or a vaginal injection of carbolized water, solution of corrosive sublimate, etc. The other extremist says it is all a humbug; he never uses anything but soap or lard on his hands. Between the two we find men of all shades of opinion, and, too, we have lately heard that either vaginal or uterine injections are extremely likely to cause evil results to follow in their train. I say, then, that even a casual reader of the obstetric literature of the period will find many opinions. If he wishes some guide to pilot him through a bad case of this fever, he will find it difficult. He will be much perplexed. I have no theory of my own, and no opinion to air in submitting these histories. Only by the recital of facts and the accumulation of clinical material will the truth at last be found out.

I attended my seventy-fifth case of confinement, that of a primipara, on May 13, 1886. Delivered with forceps about noon; there was severe hæmorrhage, and my hand was introduced into the uterus quite frequently. Had used carbolized vaseline as a lubricant, and the instruments were washed with boiling water and greased with the carbolized vaseline before being used. Everything went well until the morning of the 16th, when she had a chill followed by fever. I did not see her, and was not apprised of it, as her attendants thought it due to "milk fever." Saw her during the afternoon of the 17th. She announced herself as feeling first rate, only thirsty. She had drank a quart of lemonade during the morning. Temperature 104° F., pulse 140. She sweat profusely. Ordered quinine in full doses and vaginal injections of carbolized glycerin.

May 18th.—Morning. Delirious all night; the vaginal discharge, yesterday profuse and offensive, is better. Slight rupture of the fourchette, which looks raw and angry. There is no tenderness over the abdomen. Temperature 101°.

19th.—Morning. Delirious and sleepless all night and most of yesterday after I left her. Objects strongly to vaginal injections, which have not been thoroughly used. Temperature normal, pulse 120. Eats a trifle. Four P. M., temperature 102·5°, partially delirious. Stares around the room and sees imaginary objects. There is difficulty in keeping her in bed. Objects strongly to the injections. Seven P. M., temperature normal; covered with cold perspiration. Touched the margins of the ruptured fourchette with a mixture of Monsel's solution and compound tincture of iodine, after Lusk. Packed the vagina with carbolized cotton. Continued the quinine in lessened doses.

20th.—Sleepless and delirious during the night. Vaginal discharge profuse and fœtid. Temperature normal. Began using injections of corrosive sublimate, 1 to 10,000. 10 P. M., has been in a semi-hysterical condition most of the day. For a few minutes she is rational, then begins an incessant chattering. Temperature normal. Gave a drachm of bromide of potassium, and left her sleeping at midnight.

21st.—Morning. Temperature 102°. Slept until 6 A. M., and awoke rational. On forced pressure, there is some pain felt over the uterus. Inserted a suppository of a scruple of iodoform. Noon, temperature 99°. 6 P. M., temperature 100·3°.

22d.—11 A. M., temperature normal. There has been no delirium since last noticed. Otherwise symptoms unchanged.

23d.—11 A. M., temperature 101°. She sat up a little while yesterday. Eats pretty well. Every application to or examination of the genitalia throws her into such a hysteroid state that I dislike to do more than is absolutely necessary. Continued the use of tonics, stimulants, quinine, and suppositories of iodoform.

25th.—11 A. M., temperature 100·3°. 9 P. M., temperature 101°.

26th.—4 P. M., temperature 99°. Stopped the quinine through the day. To have twelve grains at night. To prevent if possible the hysteroid state alluded to, I ordered a solution of corrosive sublimate (1 to 10,000), and directed her to make pessaries of cotton soaked in this and apply them to the vagina herself. She does this very well. The laceration at the last examination was healing nicely.

28th.—Temperature normal. Continued the tonics with small doses of quinine thrice daily. Saw her twice after this—once on the 31st, and finally on June 4th. She was around the house at the last date, though looking very pale. I have since seen her riding out.

CASE LXXVI.—*May 16th.*—Multipara. Delivered with forceps on account of uterine inertia. Used carbolized vaseline and washed instruments with boiling water before using. Saw her May 17th and May 18th. Detected nothing wrong. On the morning of the 19th she had a heavy chill followed by a high fever. It was 8 P. M. before I saw her. Another physician had seen her about 5 P. M. and found her complaining of intense pain in the abdomen and with a high fever; temperature not taken. He had prescribed Dover's powder and veratrum viride. When I saw her she felt more comfortable; temperature 103°, pulse 130, breathing hurried. Sweat quite profusely. I continued treatment during the night.

May 20th.—Morning. Had a very comfortable night. Pain on pressure over the uterus, no tympanites, temperature 102·5°. Ordered injections of corrosive sublimate as in the former case. Quinine in four-grain doses every four hours. Evening, temperature 103·5°. Otherwise no change.

21st.—Morning, temperature 100°. Slight diarrhœa. Colicky pains at times. In addition to other treatment, opium *pro re nata.* Evening, temperature 100°. Treatment continued.

22d.—Morning, temperature 103°. Ordered injections more frequently and used the syringe myself. Some shreds of membrane came from the vagina with the first flow, but the solution soon became colorless. Evening, temperature 101°. Slight diarrhœa. Her husband thinks she is somewhat delirious at times, but I can discover nothing of it. Her appetite is *nil.* She takes about a quart of weak milk-punch in twenty-four hours.

23d.—Morning, temperature normal. From this date until the afternoon of the 26th I saw her but once. On the afternoon of the 25th there was no elevation of temperature, and the symptoms were favorable, except total anorexia. I was told when I made my visit at 3 P. M. of the 26th that she had had some diarrhœa in the interim, but it was easily controlled by lead and opium. She had also had two or three fifteen-drop doses of deodorized tincture of opium for pain. The nurse, who had used the syringe faithfully, said that the water came from the vagina colorless and odorless. At the date above mentioned her temperature was 101°, pulse 120, weak, and she was sweating. She states that often during the night she is covered with a cold sweat. There is some pain in the right iliac fossa on pressure. She has no appetite, she is pale, and her tongue has cleared off. Increased the stimulants and ordered injections of warm water non-medicated. Also ordered one teaspoonful of the elixir of gentian and iron every four hours.

27th.—11 P. M. Iron mixture produced distressing nausea. Substituted a tablespoonful of Colden's liquid food and recommended quinine. Temperature 102°.

29th.—4 P. M. Temperature normal. Sitting in bed nursing her child. No appetite, and still inclined to sweat profusely. Ordered the nurse to use the corrosive-sublimate injections again.

30th.—9·30 P. M., temperature 102°. A careful examination externally and internally failed to reveal the cause of this rise. Ordered ten grains of quinine in addition to other treatment.

June 1st.—Afternoon. Symptoms better. Temperature normal.

4th.—Continued improvement.

7th.—Temperature in the afternoon 100°. Appetite improving. Stopped the injections, as they annoyed her and there was no lochial discharge to speak of, and that not offensive.

10th.—Patient up in an adjoining room. Says she is well. Saw her for the last time on the 17th. She was assisting in the household duties.

Since discharging these patients I have attended six women in childbed. One was a case of puerperal eclampsia in which the membranes were ruptured and the forceps was applied at the pelvic brim. No one of the women had especially good hygienic surroundings, and in neither was antisepsis used; but none of them developed a single untoward symptom, and I am at a loss for a satisfactory explanation of the two cases whose histories I have given.

Glanders in the State of New York.—A press dispatch from Middletown announces that Professor Law, of Cornell University, has been inspecting a number of sick horses in the vicinity of Middletown, on behalf of the State Board of Health. He is said to have found six horses with glanders.

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TAIT'S OPERATION BEFORE THE COURTS.

The somewhat remarkable case of Casey *v.* Imlach was lately tried in Liverpool. The action was brought by a Mrs. Casey and her husband to recover damages from Dr. Francis Imlach, one of the senior surgeons to the Hospital for Women, Liverpool. It seems that Dr. Imlach performed the operation of removal of the uterine appendages in Mrs. Casey's case, and that at the trial the plaintiff's contention was that the operation was unnecessary, that they (Mrs. Casey and her husband) were not informed of its nature and of its possible incidental results beforehand, and that, as matters of fact, it not only made her sterile, but also "unsexed" her (in the sense of producing "a change not only in her own life, but in the life of her husband," as counsel put it in opening the case.)

The woman was forty years old, and had suffered for several months with recurrent attacks of pain in the left ilio-inguinal region, accompanied by excessive loss of blood. She was under treatment by various medical men at different times, deriving such an amount of benefit as to free her more or less completely of her symptoms for a number of months at a time. Finally she became an out-patient at the hospital, under Dr. Imlach's care, in June, 1883. She took the medicine prescribed for her until August, and then continued well, as she testified, until December, 1884, when she felt a return of her old pain in the abdomen, which continued for about half an hour. She went to the defendant on the 8th of December, and he then examined her. According to his testimony, "the uterus was dragged out of place, down to the left, and was immovable. His fingers could feel the posterior portion of the uterus and the vaginal viscera," whatever that may mean. "At that time he formed an opinion that the position of the uterus was due to contraction from previous inflammation of the left broad ligament, and partly due to adhesions of the uterus to the pelvic walls. . . . He could feel the Fallopian tubes behind and below the uterus, as if they were two solid limbs like two little fingers. . . . He could feel two little substances which from their relation to the tubes he was convinced were the ovaries. . . . He wrote down at the subsequent examination that they were atrophied ovaries, but at this examination he wrote salpingitis, because he was surer of that than the sclerotic ovaries. . . . His examination indicated a serious state of the woman's health. It seemed to him there was great danger of her losing her life through the irregular loss of blood, and that nothing short of an operation was required. He told her the nature of the operation, that she would never have any more children after it, and that he was fully convinced she was then sterile."

At the end of a week, during which time, the defendant felt warranted in assuming, she had acquainted her husband with the view taken of her case and with the nature and effects of the proposed operation, she was admitted into the hospital. Two days after her admission the defendant examined her again and found the same state of things as before. He then made the following entry in his note-book: "Irregular menstruation for last five years; pain in the left hypogastrium, worse just after cessation of menstruation; habits doubtful, probably irregular; weak and miserable from constant pelvic pain and hæmorrhage. Condition of the uterùs—dragged to the left by contraction of the broad ligament, also retroverted slightly; mobility restricted; length of cavity normal; ovaries atrophied." At the time of the operation the peritonæum was found "purple, showing that there was blood inside, and that he was right when he judged there was peritoneal hæmatocele." It is to be noted that this is the first mention made of hæmatocele in the defendant's testimony. A mass of clotted blood about as large as a small orange, made up of two or three separate clots, was found free in the pelvic cavity, and was removed. The ovaries were situated low in Douglas's pouch, but were easily brought up to the incision; with the right one came the appendix vermiformis. The outer half of the right tube, which was adherent to the appendix, contained an old blood-clot which, as the defendant recollected, was of "about the size of a cork, and was sticking out of the fimbriated extremity." At first he thought this was fæcal matter, but on more careful examination it seemed to be a clot ulcerating into the appendix. Having separated the tube from the appendix, the defendant "carefully looked to see whether there was any perforation, and satisfied himself that there was." The tube was thickened from chronic inflammation, the latter being "so severe that it bled." Both the tube and the ovary were removed. He then "felt for the left tube, and found that it was pulling the uterus down. It was thickened and dense and adhering to the pelvic walls. After separating the adhesions he drew it up to the surface outside the incision, and found it a source of great danger to the woman. He removed it with the ovary. From what he saw of the ovaries he became certain they were sclerosed throughout. They were contracted like the hard kernel of a hazel-nut. He was certain it was a case of hopeless sterility."

Dr. Imlach's statement of the facts in the case, although in the main not supported by other testimony, was not controverted at the trial, save for the woman's contention that the nature of the operation was not properly explained to her beforehand. On this particular point, however, the defendant's position was strengthened by the testimony of the lady superintendent of the hospital and a nurse, the latter of whom testified that "she told Mrs. Casey that she would never be 'unwell' again, and the reply was 'a good thing, too,' or words to that effect." The jury, a special one certified for on the application of defendant's counsel, announced at once on the conclusion of the testimony that they were ready with a verdict, and, counsel having agreed to forego argument, a verdict for the defendant was returned.

We agree with the "Lancet," whose detailed account of the trial we have made use of, that Dr. Imlach is to be congratulated on the result of the case. In our opinion the operation was not only clearly justifiable, but in all probability was the means of saving the woman's life. But some collateral circumstances were brought out on the trial that seem proper for comment. In the first place, the medical testimony in behalf of the prosecution seems to have come largely from gentlemen who are prejudiced against oophorectomy, and to a somewhat unreasonable extent. Apart from this, the point they all sought to make was that the defendant had not waited so long as they would have waited, in such a case, to try the effect of rest and medicinal treatment; but it is only fair to add that they admitted the overpowering weight of a physical examination in determining the question, whereas they could only testify on second-hand information, and that one of them very properly objected to giving *ex parte* statements without seeing the patient. Still, their testimony seems to us to have been unduly colored by a feeling of opposition to the operation in general. One of them thought that hæmatocele and hæmatosalpinx combined called for long medical watching before having recourse to surgery, and that in such a case he himself would not resort to an operation unless there was an extra-uterine fœtus.

No less startling is Mr. Lawson Tait's testimony in the opposite direction, he having been called by the defense. Mr. Tait said that peritoneal hæmatocele was fatal in ninety-six per cent. of the cases if left to itself, that in the great majority of cases it was fatal in three hours, and that the longest time he had known it to take to cause death was forty-eight hours. We can explain this sweeping declaration only by supposing that Mr. Tait had in mind not hæmatocele strictly so called, but free hæmorrhage into the peritoneal cavity. Taking into account only those cases in which intra-peritoneal hæmorrhage has been clearly made out prior to the conversion of the effusion into an hæmatocele by the formation of a limiting wall of inflammatory exudate—and Mrs. Casey's case seems to have been of that sort—Mr. Tait's figures may give a very fair view of the facts. But such cases are not cases of hæmatocele, properly speaking.

The question of the effect of oophorectomy on the sexual instinct is one of practical interest, and its alleged destructive effect was set up by the plaintiffs in this case. Observation seems to show that the sexual appetite is modified in one way or the other—impaired or heightened—by the most diverse morbid conditions within the pelvis. We are therefore not surprised that Mr. Tait should have said, being asked as to the effect of oophorectomy, "In no case that I have ever asked the question have I found it destroy the sexual appetite at all, and in very many cases where the disease destroyed it the operation has restored it." Some of the other witnesses testified that their inquiries on the point had elicited from some patients the statement that the feeling had gone, and from others the declaration that it had not.

One of the surgeons of the hospital testified that he had not been notified to attend a consultation in Mrs. Casey's case. Although some of the junior medical officers of the institution were present at the time of the operation, it appears that Dr. Imlach omitted to fortify himself by calling a general consultation, notwithstanding a rule of the hospital provides that "no operation of a dangerous character shall be performed in the hospital without consultation between one of the medical officers for in-patients and one of the consulting medical officers and the operators." According to Dr. Imlach's testimony, he did not consult any one but Dr. Lupton about this case, and, although he could not recollect, his distinct impression was that Dr. Lupton did not see the patient, but simply talked the case over with him. "He is perfectly familiar with my methods and with my accounts of the cases," said Dr. Imlach. "My recollection is that he was to see the patient, but we had had a very heavy operation, and I was so exhausted, as the operator, that we simply talked this case over." Unfortunately, Dr. Lupton subsequently became the victim of a disease that incapacitated him for testifying, even in the way of deposition, so that at the trial the defendant could bring forward no statement of facts but his own. This should serve to emphasize the wholesomeness and prudence of the rule generally observed in well-managed hospitals of allowing no major operation, save in pressing emergencies, without a consultation to which the whole surgical staff has been invited.

Of course, the status of Tait's operation in general was in no wise affected by the proceedings at the trial, but the latter served to bring up some collateral points of interest, including those that we have mentioned.

THE PASTEUR INSTITUTE.

It is well known that several deaths have happened of persons who had undergone M. Pasteur's method of protective inoculation for rabies or were still undergoing the process, and it is no more than natural that each succeeding death should have had its effect in undermining the confidence that had come to be felt in the system. Looking at the precise facts, however, we may still cherish the feeling that a great triumph has been set on foot if not already accomplished.

On the 5th of this month, as we learn from the "Gazette hebdomadaire de médecine et de chirurgie," the Paris *Conseil municipal* ceded to the society of the *Institut Pasteur*, by a vote of thirty-three to fourteen, for a period of ninety-nine years, the land that had previously been allotted to it for thirty years only. In the course of a discussion that preceded the vote, a statistical statement was furnished giving the results thus far accomplished. The whole number of persons treated amounted to 1,656, of whom 15 had died; 1,009 of these persons belonged in France, and 3 of them died; 182 (including 50 bitten by rabid wolves) came from Russia, and 11 of them died (3 after dog-bites and 8 after wolf-bites); 20 from Roumania, of whom 1 died; and 59 from England, 17 from Austria, 74 from Algeria, 18 from America, 2 from Brazil, 42 from Belgium, 58 from Spain, 7 from Greece, 8 from Holland, 25 from Hungary, 105 from Italy, 20 from Portugal, 2 from Turkey, and 2 from Switzerland, none of whom died.

Including the cases of persons bitten by rabid wolves, who furnished more than half the deaths, the total mortality amounts, therefore, to less than one per cent. Surely this is most encouraging. It will scarcely be maintained that any such proportion of immunity would have followed in the natural course of things, at least among those who do not utterly deny the existence of rabies as a specific disease; and the objection that time enough has not elapsed to enable us to judge of the fate of the bitten persons, in view of the long incubation popularly ascribed to the disease, is fast losing its force, for some of the cases date back now more than a year. Even if we were to concede the non-existence of rabies, and accept the view that those who are supposed to die of it really perish from fright, M. Pasteur would still be entitled to the gratitude of mankind for having saved 1,641 persons from dying of fright.

ITEMS, ETC.

Infectious Diseases in New York.—We are indebted to the Sanitary Bureau of the Fourth Division of the Health Department for the following statement of cases and deaths reported during the two weeks ending August 24, 1886:

DISEASES.	Week ending Aug. 17.		Week ending Aug. 24.	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever	27	5	27	6
Scarlet fever	8	5	14	2
Cerebro-spinal meningitis	4	4	5	5
Measles	38	9	38	8
Diphtheria	57	24	43	24

Pneumatic Differentiation.—A correspondent inquires whether there is being manufactured a pneumatic cabinet other than that made by the Pneumatic Cabinet Company. We are not aware that there is, and feel quite safe in answering the inquiry in the negative. Our understanding of the matter is, that the company referred to is the sole manufacturer, under the personal supervision of the inventor, and that it is fully protected by rights patent which bring the manufacture of cabinets exclusively under the control of the company.

The Paris Faculty.—The "Gazette hebdomadaire de médecine et de chirurgie" announces the names of M. Gavarret, M. Hardy, and M. Sappey as among those who are declared authorized to make good their title to retirement and a pension on the 1st of November, and to be styled honorary professors.

Madame Patti, according to the "Lancet," was to give a concert at Swansea, England, on Thursday evening of last week for the joint benefit of the Swansea General Hospital and the poor of the neighborhood of Craig-y-nos Castle, her Welsh seat.

Army Intelligence.—*Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from August 15, 1886, to August 21, 1886:*

Magruder, David L., Lieutenant-Colonel. Promoted to surgeon, with rank of colonel, July 26, 1886, vice Brown, retired.

Alexander, Charles T., Major. Promoted to surgeon, with the rank of lieutenant-colonel, July 26, 1886, vice Magruder, promoted.

Cronkhite, Henry M., Captain and Assistant Surgeon. To be surgeon, with the rank of major, July 26, 1886, vice Alexander, promoted.

Walker, Freeman V., of Georgia. Appointed assistant surgeon, July 27, 1886, vice Cronkhite, promoted.

Baily, J. C., Major and Surgeon. Granted one month's leave of absence. S. O. 111, Division of the Atlantic, August 17, 1886.

Bentley, E., Major and Surgeon. Granted one month's leave of absence, and at its expiration to report for duty as post surgeon at Little Rock, Ark. S. O. 113, Division of the Atlantic, August 18, 1886.

Tremaine, W. S., Major and Surgeon. Sick leave further extended six months. S. O. 187, A. G. O., August 13, 1886.

Loring, L. Y., Captain and Assistant Surgeon. Leave of absence granted him in S. O. 59, August 2, 1886, Division of the Pacific, extended two months on surgeon's certificate of disability. S. O. 189, A. G. O., August 16, 1886.

Taylor, B. D., Captain and Assistant Surgeon. When relieved by Surgeon Bentley, to proceed to Jackson Barracks, La., and report for duty as post surgeon. S. O. 113, c. s., Division of the Atlantic.

Hopkins, William E., First Lieutenant and Assistant Surgeon. Assigned to duty as post surgeon at Angel Island, Cal. S. O. 61, Division of the Pacific, August 6, 1886.

Borden, William C., Lieutenant and Assistant Surgeon. Assigned to temporary duty at Fort Bridger, Wyoming, during the absence of Assistant Surgeon Crampton. S. O. 100, Department of the Platte, August 9, 1886.

Wales, Philip G., Lieutenant and Assistant Surgeon. Relieved from duty in the Department of the Columbia, and to report in person at Headquarters Division of the Pacific for further orders. S. O. 62, Division of the Pacific, August 9, 1886.

Mason, Charles F., First Lieutenant and Assistant Surgeon. Assigned to duty as post surgeon at Plattsburg Barracks, N. Y. S. O. 113, Division of the Atlantic, August 18, 1886.

Naval Intelligence.—*Official List of Changes in the Medical Corps of the United States Navy for the week ending August 21, 1886.*

Stone, Dr. E. P. Commissioned an assistant surgeon in the navy. August 5, 1886.

Wentworth, A. R., Assistant Surgeon. Ordered to temporary duty, Navy-Yard, League Island, Pa.

Lippincott, G. C., Passed Assistant Surgeon. Ordered to Annapolis, Md., for temporary duty, member Medical Examining Board.

Marine-Hospital Service.—*Official List of Changes of Stations and Duties of Medical Officers of the United States Marine-Hospital Service, for the week ended August 14, 1886:*

Carter, H. R., Passed Assistant Surgeon. Granted leave of absence for thirty days. August 12, 1886.

Glennan, A. H., Assistant Surgeon. Granted leave of absence for thirty days. August 9, 1886. Ordered to examination for promotion. August 12, 1886.

Pettus, W. J., Assistant Surgeon. When relieved at Savannah, Ga., to rejoin his station at New Orleans. August 13, 1886.

Society Meetings for the Coming Week:

Wednesday, *September 1st:* Harlem Medical Association of the City of New York; Medical Society of the County of Richmond (Stapleton).

Thursday, *September 2d:* New York Academy of Medicine; Society of Physicians of the Village of Canandaigua, N. Y.; Obstetrical Society of Philadelphia.

Friday, *September 3d:* Practitioners' Society of New York (private).

Saturday, *September 4th:* Clinical Society of the New York Post-graduate Medical School and Hospital; Manhattan Medical and Surgical Society (private); Miller's River, Mass., Medical Society.

Letters to the Editor.

ALEXANDER'S OPERATION.

74, rue de Miromesnil, Paris.

Monsieur le rédacteur en chef:

Je lis dans le No. du 31 juillet du "N. Y. Med. Journal," page 138, une brève analyse d'un article de moi sur le "Shortening of the Round Ligaments," par M. le Dr. H. C. Coe. Je serais heureux de pouvoir, par la voie de votre même journal, répondre quelques mots à ce sympathique confrère, sur certains points de sa note.

1. Je ne veux pas laisser croire que je suis "ignorant" de la participation active des médecins américains aux choses de l'obstétrique et de la gynécologie. Je tiens à protester contre ce soupçon d'injustice ou de manque de courtoisie.

Vous pouvez voir, en effêt, dans le No. d'avril des "Nouvelles archives d'obstét. et de gynécologie," pp. 237, 238 et 239, que je connaissais déja dès cette époque au moins *16 cas* de "shortening" opérés à New York: 10 par Polk, 6 par Mundé. Je les ai discuté, analysé et compris dans ma statistique. Ce n'est pas, je pense, être ignorant de la part des Américains dans la question.

M. H. Coe parle de 25 opérations jusqu'à ce jour. Je ne dis pas non; mais *il y a plus de trois mois* que mon article est paru. Depuis j'ai eu notion de quelques autres cas, et j'ai appris, à Paris, de le bouche même de M. Mundé, qu'il a opéré maintenant 8 fois le shortening. Cela peut bien faire 25, je pense, en tout, et je n'omettrai pas d'en tenir compte dans mes conclusions.

2. Quant à ma conduite personnelle en égard à cette vieille opération française, remise en honneur par un chirurgien anglais, je pense avoir suivi une marche raisonnable. *a*) Comme cela m'a paru juste, j'ai commencé par étudier l'opération sur le cadavre. J'ai constaté quelques difficultés et quelques dangers que j'ai peut-être exagérés dans une première note, mais que j'ai rectifiés publiquement par plusieurs notes ultérieures basées sur de nouvelles recherches et sur une appréciation plus judicieuse des faits. *b*) J'ai ensuite analysé tous les cas connus, et je pense n'avoir rien omis d'important à cet égard. *c*) J'ai vu opérer deux cas de shortening. *d*) J'ai enfin opéré moi même plusieurs fois le shortening sur la femme vivante, et j'en ai modifié quelque peu l'applications thérapeutiques.

Je suis arrivé aux *conclusions* suivantes:

Opération—ses *dangers*, ses *difficultés.*—*a*) Bien faite et protégée par une antisepsie rigoureuse l'opération est *sans dangers.* *b*) On peut éprouver des difficultés à trouver l'un ou les deux ligaments. Cela dépend de l'âge, de l'embonpoint, etc., du sujet (ma statistique générale comprend des cas assez nombreux de cette difficulté). *c*) On peut manquer complètement de trouver l'un ou les deux ligaments (quelques cas rapportés dans ma statistique générale). *d*) On peut casser l'un ou les deux ligaments, trop faibles ou très atrophiés (quelques cas publiés; un cas m'est personnel, chez une femme maigre et anémique). Cet accident peut arriver malgré toutes les précautions prises. *e*) Souvent le recherche des ligaments ronds est beaucoup plus facile sur la vivante que sur le cadavre. *f*) De ces faits je conclus qu'avec quelque habitude cette opération n'offre ni plus ni moins de difficultés pratiques que la moyenne des opérations de gynécologie.

Résultats de l'opération.—*g*) D'après les cas connus, les échecs constatés immédiatement après sont rares. Rarement on a vu l'utérus retomber ou se renverser de nouveau en arrière de suite après l'opération. Au contraire, la propor-

To the Editor of the New York Medical Journal:

Sir: I read in the "New York Medical Journal" for July 31st an abstract of an article of mine on "Shortening of the Round Ligaments," by Dr. H. C. Coe. I should like to say a few words, in the same journal, in reply to this sympathetic *confrère*, on certain points in his note.

1. I am unwilling to let it be thought that I am "ignorant" of the active part taken by American physicians in obstetrical and gynæcological matters. I must protest against this suspicion of injustice or of lack of courtesy.

Indeed, you may see in the April number of the "Nouvelles archives d'obstétrique et de gynécologie," pp. 237, 238, and 239, that at that time I was cognizant of at least *16 cases* of "shortening" in New York: 10 by Polk, 6 by Mundé. I have discussed them, analyzed them, and included them in my statistics. This, I think, shows that I am not ignorant of the part taken by Americans in the question.

Dr. Coe speaks of 25 operations up to the present time. I do not deny this; but *it is more than three months* since my article appeared. I have since learned of certain other cases, and I have heard in Paris, from Dr. Mundé's own mouth, that he has now done the operation 8 times. Very likely, I presume, this makes 25 in all, and I shall not fail to take them into account in my conclusions.

2. As to my personal part in the matter of this old French operation, newly brought into favor by an English surgeon, I think I have followed a reasonable course. *a.* As appeared to me to be just, I began by studying the operation on the cadaver. I observed some difficulties and some dangers, which perhaps I exaggerated in my first note, but which I publicly set right in several subsequent notes founded on new researches and on a more judicial appreciation of the facts. *b.* I then analyzed all the cases known, and I think I omitted nothing of importance concerning them. *c.* I witnessed two operations of shortening. *d.* Finally, I did several shortening operations myself on the living subject, and I somewhat modified the therapeutical applications of the measure.

I have arrived at these *conclusions:*

The operation—its *dangers* and its *difficulties.*—*a.* Well executed, under rigorous antiseptic precautions, the operation has *no dangers.* *b.* Difficulty may be met with in finding one or both of the ligaments. That depends on the patient's age, condition as to fleshiness, etc. (my general statistics include quite a number of instances of this difficulty). *c.* We may wholly fail to find one or both of the ligaments (a few cases reported in my general statistics). *d.* We may break one or both of the ligaments, if they are too weak or very much atrophied (some cases published; one, which happened to me, was in a lean and anæmic woman). This accident may happen in spite of all precautions. *e.* The search for the round ligaments is often much easier on the living subject than on the cadaver. *f.* From these facts I conclude that, with a certain degree of skill, this operation involves no more and no fewer practical difficulties than gynæcological operations in general.

Results of the Operation.—*g.* Judging from the cases known, failures recognized immediately after the operation are rare. Rarely has the uterus been seen to become retroverted or prolapsed again immediately after the operation.

tion de succès l'emporte de beaucoup sur les insuccès à condition que l'on respecte les *indications* et les *contr'indications* posées par Alexander. Or, il a été lui même obligé de modifier peu à peu, avec les leçons de l'expérience, le *modus faciendi* opératoire. Malheureusement quelqu'uns de ses conseils ainsi donnés successivement sont venus trop tard pour certains imitateurs trop empressés — c'est peut-être la raison de quelques insuccès. *h*) En définitive, pour juger le résultat opératoire d'un procédé destiné à remettre l'utérus en place, dans les cas de *prolapsus*, de *rétroversion*, et même de *rétroflexion* opérables, il faut attendre plusieurs années. Il n'y a donc pas assez longtemps que la plupart de ces opérations ont été exécutées, pour pouvoir en juger les résultats éloignés, par conséquent la valeur réelle et définitive de l'acte opératoire. Mais rien ne s'oppose à ce qu'on accepte dès maintenant la possibilité de beaucoup de guérisons véritables et radicales par le raccourcissement des ligaments ronds.

3. J'ai, dans le No. du mois de juin des "Nouvelles archives d'obstétrique et de gynécologie," montré les *desiderata* du shortening opéré seul contre le *prolapsus utérin compliqué de cystocèle* (coincidence fréquente). J'ai proposé une nouvelle opération plus complète —la combinaison de l'opération plastique (colpo-périnéorrhaphie, etc.) avec le shortening. J'ai publié un succès qui jusqu'ici ne s'est pas démenti, et j'en possède un autre inédit aussi certain. Ma proposition est venue à la suite d'une critique d'une idée analogue émise par Alexander, de combiner les deux procédés (shortening et opération plastique), mais en séparant les deux actes opératoires et en commençant par le shortening, suivi à quelques pas de distance de l'opération plastique. Pour moi, cet ordre dans la succession des deux opérations ne peut pas se justifier, et j'avais déja exécuté un plan différent lorsque j'ai connu les dernières opérations d'Alexander. Selon moi, il faut commencer par l'opération plastique et finir par le shortening; les deux opérations se font en une seule séance, et ne demandent guère plus de trente minutes dans les cas ordinaires. J'ai d'ailleurs expliqué mes raisons pour agir ainsi ("Nouv. arch. d'obstét. et de gyn.," juin, 1886).

Vous voyez donc, M. le rédacteur en chef, que je ne suis pas l'ennemi de notre vieille opération française, restaurée heureusement par Alexander. Je crois, au contraire, que les gynécologues ne doivent pas, vue son innocuité bien établie, se priver d'une ressource qui est loin d'être jusqu'ici démontrée vaine et trompeuse.

On the contrary, the proportion of successes far exceeds that of failures, provided the *indications* and *contra-indications* laid down by Alexander are respected. Now, he himself has been obliged, according to the lessons of experience, to modify the *modus faciendi* of the operation gradually. Unfortunately, some of his counsels, given thus in succession, have arrived too late for certain too ardent imitators —perhaps that accounts for some of the failures. *h*. Finally, to judge of the results of a procedure intended to restore the uterus to its place, in suitable cases of *prolapse*, *retroversion*, and even *retroflexion*, we must wait several years. Most of these operations have not been done long enough for us to judge of the final results, and consequently of the real and definite value of the operation. But there is no reason why we should not provisionally accept the possibility of many true and radical cures by shortening of the round ligaments.

3. In the June number of the "Nouvelles archives d'obstétrique et de gynécologie," I showed the defects of the operation of shortening alone for *prolapsus uteri complicated with cystocele* (a frequent coincidence). I proposed a new and more complete operation —a combination of a plastic operation (colpo-perineorrhaphy, etc.) with the shortening. I have published one success, which thus far has not been called in question, and I have another, not yet published, quite as well assured. My proposal was the consequence of a criticism of an analogous idea coming from Alexander, of combining the two procedures (shortening and a plastic operation), but at separate sittings, the shortening being done first and the plastic operation after a considerable interval. In my opinion, this order in the succession of the two operations can not be justified, and I had already carried out a different plan when I became acquainted with Alexander's later operations. It is my opinion that we ought to begin with the plastic operation and finish with the shortening; the two operations are done at one sitting, and in ordinary cases take hardly more than half an hour. I have elsewhere given my reasons for so doing ("Nouv. arch. d'obstét. et de gyn.," June, 1886).

You see, then, Mr. Editor, that I am not an opponent of our old French operation, happily restored by Alexander. On the contrary, I believe that, in view of its well-established innocuousness, gynæcologists ought not to deprive themselves of a resource which is thus far anything but demonstrated to be vain and deceptive.

Veuillez agréer, etc.,

A. Doléris.

*** We think we have given a correct English version of M. Doléris's letter, but, to prevent the possibility of error, we have thought it best to give the original French also. On behalf of our contributor, Dr. Coe, we wish to say that the report which included the abstract of M. Doléris's article was in type before the number of the "Nouvelles archives" which contained the conclusion of the article had been seen by him, and that, when the report left his hands, he was under the impression that M. Doléris's article had been published entire.

THE LATE DR. ELLSWORTH ELIOT HUNT.

To the Editor of the New York Medical Journal:

Sir: Please announce to the profession the death of Dr. Hunt, son of Dr. Ezra M. Hunt, of Metuchen, more recently of Trenton, N. J. The deceased was born in Metuchen, May 15, 1855, and died August 17, 1886, at Pensacola, Fla., of phthisis. He was educated at Phillips Andover Academy and Princeton College, from which he was graduated in 1875, taking the second honor and delivering the Latin salutatory. During his sophomore year he took the Stenike prize in languages, being the first to receive it. He was also accounted as good a mathematician as the class contained, but he did not contend for the prize in that branch. In his senior year, as the result of a written examination, he secured the fellowship in experimental sciences, which entitled him to a year of post-graduate study at Princeton or abroad. He chose to remain at Princeton, and there studied during the year, distinguishing himself in physics. He was graduated in medicine from the College of Physicians and Surgeons, of New York, with third honor, in 1878. During his course there he was clinical assistant to Dr. Alonzo Clark. Having finished the usual term of service on the house staff of the Roosevelt Hospital, he went to Vienna, where he studied surgical specialties till he seemed to have rounded his course of study to the utmost. In the autumn of 1882 Dr. Hunt opened an office in Lexington Avenue, New York. After a little more than a half-year from the beginning of his practice he was seized with acute tuberculosis. He returned to his father's home and spent his three remaining years seeking health at home and in Pensacola, Fla. He was buried in Metuchen August 21st.

He inherited a disposition to tuberculosis through two generations, and to those who saw him only casually he might, from his pale face, slender figure, and slight stoop, have seemed not to be strong. To those who saw him month after month accomplishing huge tasks, noted his quick, elastic step, his tireless energy, his never-failing appetite, buoyant spirits, and hopefulness, he must have seemed blessed with the unmistakable signs of health. He regarded himself as perfectly healthy till he caught the first crimson stain on his handkerchief.

The preceding record tells its own story. To say that a student in one of Princeton's classes has taken a prize in languages, has stood among the first in mathematics, and taken a fellowship in sciences, is to designate an intellect both brilliant and broad, to point to a man without peer in a thousand of his fellows. His breadth in scholarship was quite equaled by his breadth in general information. He seemed never to have forgotten a college study. He was without vices; he was a devoted son and brother. He selected few intimate friends, and to them alone did he show his true nature. The intimate associates and friends of Dr. Hunt desire to put before the profession a brief record of this brilliant and gifted student, this clean, cultivated, intellectual, Christian gentleman, and allow them to lament with us the loss we have sustained.

Yours, W. P. Northrup.

57 East Seventy-ninth Street.

THE EARLY DIAGNOSIS OF PREGNANCY BY MEANS OF THE SOUND.

August 24, 1886.

To the Editor of the New York Medical Journal:

Sir: In your last issue, for August 21st, I find the leading abstract in the "Report on Obstetrics" to be on "The Early Diagnosis of Pregnancy by Means of the Sound," by Massarenti, from the "Rivista Clinica," January, 1886. The author has practiced and recommends the diagnosis of pregnancy in the early weeks by measuring the uterine cavity with a flexible wax bougie passed to the fundus. I am induced to write this note because the method of Massarenti is published in your journal without comment as to its safety or danger; and chiefly because several years ago I declined an original article sent to the "Journal of Obstetrics" by a well-known Western gynæcologist, who advocated precisely the same practice, my refusal being based on the ground that to publish an article recommending a method so obviously dangerous and injurious would open a field to its use and abuse by incompetent and unscrupulous physicians. It seemed to me that one might as well offer to diagnosticate the existence of pregnancy by the occurrence of abortion. A protest against the promulgation of such baneful methods appears to me pertinent.

Yours truly,

Paul F. Mundé.

⁂ It is true that our reporter made no formal comment on the method, but he used the expression "a procedure which is commonly regarded as most reprehensible," and that seemed to us at the time enough to say. As all knowledge is valuable, our readers were entitled to be made acquainted with Massarenti's facts. We do not believe that they will be led astray by them.

A Death from Hydrophobia.—It is reported that one of the leading citizens of Edgefield County, South Carolina, died from hydrophobia on Wednesday last. He was bitten last May by a cur, which was instantly killed. The wound healed readily, and the bite gave him no uneasiness. Symptoms, it is alleged, of hydrophobia developed on Tuesday last, and, after twelve hours of great suffering, death came to his relief.

Proceedings of Societies.

PHILADELPHIA CLINICAL SOCIETY.

Meeting of June 25, 1886.

Dr. Amy S. Barton, in the Chair;

Dr. Mary Willits, Reporting Secretary.

Operation for Abdominal Fistula and Removal of Gall-stones.—A paper with this title was read by Dr. Marie B. Weiner, who said that Mrs. S. came to her in May, 1883, to ascertain if anything could be done for a fistula which was located about one inch below and three fourths of an inch to the right of the umbilicus. The fistula had existed for about two years and a half, had remained open, and discharged a muco-purulent fluid. The patient gave the following history: During October of 1880, for a period of two weeks, she had had an attack of fever, and, although there had been morning remissions and evening exacerbations, it had never entirely left her, and had been accompanied by severe colicky pains in the right side. There had been also a general tenderness, and her skin had been, as her sister had expressed it, of the color of old gold. From the time of this attack until the following January her health had been good. Early in that month she had, unaided, lifted her mother into bed; and a few days after, while walking, she had slipped in such a manner as to throw her body backward, but without falling. This accident had been followed by a sudden pain in the abdomen. A "lump" had formed, six or seven inches in length, diagonally upward from the umbilicus on the right side, and of about the size of a large fist. This swelling had at times partially, but never entirely, dispeared, and the skin of the right side had had a greenish-yellow discoloration, similar to that of a bruise, gradually assuming a dark-red color around the umbilicus. Some time in March, 1881, a small vesicle had appeared a little below and to the right of the umbilicus, and the patient had picked it with a needle. A thin liquid, mingled with some pus, had escaped from it. She had poulticed it only at intervals, being uncertain what course to pursue, but she had finally shown it to her physician, who had informed her that it was a fistula, which would have to be laid open. This had not been done, and the patient had continued to try the various remedies prescribed, without benefit, as it had continued to gather and break, until she had discovered that by keeping the opening patent much comfort could be derived. At a subsequent period a small concretion of the size of a grape-seed had escaped from the opening, but it had not been preserved. There had been no bile in the discharge.

When the speaker first examined the patient, a bluish spot was seen of about the size of a dime, one inch below and three fourths of an inch to the right of the umbilicus, somewhat raised above the surrounding tissue, and with an opening in the center. The probe entered to the depth of four inches with very little resistance and no pain, passing upward to the right and almost directly inward. It was thought that an abscess had formed in the abdominal wall, for, though carefully questioned, she denied any jaundice, and it was not until after the operation that she admitted that there had been any, and she mentioned then for the first time the passage of the concretion referred to. After resorting to the various methods commonly employed in such cases, but without benefit, Dr. W. W. Keen was called in consultation, and he succeeded in introducing the probe to the depth of six inches, its course seeming to be more direct posteriorly. Dr. Keen advised an exploratory incision, which was made on May 1, 1884. The patient being etherized, a probe was introduced and its direction determined by counter-pressure. An incision four inches in length was made diagonally over the probe in the direction of the liver. The fistulous tract was thus laid open, and the probe, which could then be inserted two inches farther, struck a resisting body. The canal was then dilated by a forceps, and a small calculus fell between the blades and was withdrawn with the instrument. This was followed by the removal of ten—in all eleven—calculi of a whitish color and varying in size from that of an ordinary black toilet-pin-head to that of a hickory-nut. The wound was carefully washed with a five-per-cent. solution of carbolic acid, a large drainage tube was introduced, the wound was closed with nine sutures, and an antiseptic dressing applied. Convalescence was rapid, the patient being permitted to get up on May 14th. During her confinement to bed her temperature varied from 98·4° to 101° F.

On June 11th the patient visited Dr. Keen at his office. The discharge from the wound was still free and of a muco-purulent character, and Dr. Keen suggested daily injections of a solution of the tincture of the chloride of iron, forty drops to an ounce of water, and that the drainage-tube, which had already been changed for a smaller and shorter one, be still further shortened, with a view of determining if a communication existed between the tract and the duodenum. The injections were continued for ten days and the discharge was materially lessened, but there was no evidence in the fæces that the tract communicated with the duodenum. Injections every other day of nitrate of silver in solution, fifteen grains to the ounce, were then commenced, with continued improvement. During the period of twenty-four months there had been two profuse discharges of pus from the tract, preceded by great pain radiating along the right side and between the shoulder-blades. After the last discharge, the probe could be inserted six inches and a quarter, passing slightly upward and almost directly inward and producing sharp pain. The patient's condition was much improved by the operation, and she was willing to submit to another if a reasonable prospect of recovery could be assured her.

Book Notices.

Louis Pasteur; his Life and Labors. By his Son-in-law. Translated from the French by Lady Claud Hamilton. New York: D. Appleton & Co., 1885. Pp. xliii–300.

This little work has appeared in this country at a peculiarly opportune time, since so much popular and professional interest has been lately aroused by the announcement of the remarkable discoveries of Pasteur in regard to rabies. As Tyndall has said in his introduction to the English translation, "it is a filial tribute, written under the immediate supervision of M. Pasteur by his devoted son-in-law, M. Valery Radot, and contains the record of a life of extraordinary scientific ardor and success." Only rarely has it fallen to the fortune of one man to successfully solve so many problems of such great popular and scientific interest and importance as has been the case with M. Pasteur. This account of his life and labors presents in a pleasing and popular style the essential points in his discoveries and contains just such information as many of the profession and laity at this time desire to obtain.

It does not aim to furnish a scientific discussion of the questions in germ life which it treats of, and contains some of those inaccuracies in statement which are almost inseparable from a popular account of scientific subjects, but still presents in a very readable form a large amount of interesting matter concerning Pasteur's studies with regard to the microscopic forms of life and their relation to fermentation and disease.

Asiatic Cholera. Being a Report on an Outbreak of Epidemic Cholera in 1876, at a Camp near Murree, in India. By Charles Moore Jessop, M. R. C. P., Associate of King's College, London; Brigade Surgeon H. M. British Forces. London: H. K. Lewis, 1883. Pp. 47.

The epidemic which this book describes was not an extensive one, and the chief point of interest in it, from a medical standpoint, is in regard to the treatment which was adopted. Prerequisites in this, as in all such diseases, are good drainage, good air, and proper diet. The author's experience leads him to the conclusion that the hypodermic injection of chloral is the best means for bringing the stage of collapse to an end, and this must be supplemented by keeping the patient's head high and his legs depressed. Strychnine and turpentine were also found useful, but to a lesser degree than the chloral.

Clinical Therapeutics. Lectures in Practical Medicine, delivered in the Hospital St. Antoine, Paris, France, by Professor Dujardin-Beaumetz, Physician to the Cochin Hospital, etc. The Treatment of Nervous Diseases, of General Diseases, and of Fevers. Translated by E. P. Hurd, M. D., etc., Newburyport, Mass. Detroit: George S. Davis, 1885. Pp. xvii–491.

This attractive volume is rather a new departure from the usual translations. The original consists, as the translator states, of a series of oral lectures, which were subsequently extended from the brief notes of M. Dujardin-Beaumetz. Consequently they are exceedingly practical and informal, and in its English dress the book will be more welcome than if it was a strictly scientific treatise. The volume is divided into three parts: the first, including ten lectures on the treatment of diseases of the nervous system; the second, seven on the treatment of general diseases; while the third part consists of four lectures treating of the therapeutics of fevers. The brief opening lecture, on the general principles of clinical therapeutics, deserves a careful perusal. Every page is enriched by copious foot-notes. It is impossible in such a brief notice as the present one to do justice to the solid learning, as well as brilliancy, of the distinguished author. His style is terse, often epigrammatic, and singularly clear. The translator has succeeded in preserving, to no small degree, the spirit of the original. Both the table of contents and the index are exhaustive. The binding is quite unique, its effect being altogether pleasing.

The Diseases of Sedentary and Advanced Life. A Work for Medical and Lay Readers. By J. Milner Fothergill, M. D., Physician to the City of London Hospital for Diseases of the Chest, etc. New York: D. Appleton & Co., 1885. Pp. viii–295.

This book is very unequal as to the merit of its various parts. The opening chapter, on *childhood*, is evidently adapted for the comprehension of the laity. The preface states that the work is intended not only for lay readers, but for old practitioners who have not been able to keep up with the times in their reading, and for young men just out of hospital. We think it would be a pity if old practitioners were ignorant of the simple and necessary truths of physiology, hygiene, and pathology which this book enunciates, and we find nothing in it which the younger men would fail to find in any of the standard text-books on general medicine. Lay readers would doubtless be edified by some of the chapters which deal with hygiene as applied to individuals in different trades and occupations, and the advice which is given in these chapters is sound and wholesome. They would hardly be expected, however, to appreciate the chapters which treat of the diseases of the aged and their care, for this presupposes a working knowledge of physiology and pathology. The errors of style and expression, which are too frequent, lead one to think that the book was hastily written, and not revised. The recommendations as to diet, climate, and home surroundings are all addressed to English, and especially to London, readers; this portion of the book, at least, therefore, should be re-written and re-edited to adapt it to the requirements of American readers.

The Ten Laws of Health; or, How Diseases are produced and prevented; and Family Guide to Protection against Epidemic Diseases and other Dangerous Infections. By J. R. Black, M. D. Philadelphia: J. B. Lippincott Co., 1885. Pp. xviii, 13 to 413. [Price, $2.]

Excepting three or four simple verbal alterations, the body of this work is a verbatim reprint of the first edition, published about thirteen years ago, and takes no note of the advances made since then in divers branches of knowledge bearing directly on practical hygiene. It can, therefore, scarcely be regarded as a very illuminating addition to our means of physiological, pathological, or sanitary education. The author's ideas of sewerage, warming, and ventilation are of rather a primitive character, as may be inferred from his reference to the "deadly carbonic-acid gas," and his advocacy of a "branch gas-pipe" from the sewer into a chimney-flue as a preventive of the deleterious effects of "sewer gases." The somewhat dogmatic disquisition on diet is chiefly devoted to an utter condemnation of "refined" and "concentrated" food, and of all cookery tending to palatability ("Graham biscuit" being held up as the typical triumph of culinary art), and to an unqualified insistance on total abstinence from tea, coffee, alcohol, and tobacco; the dire effects of all and several of which are emphasized by the startling statement that "more than half of the young ladies of today are compelled to use artificial teeth."

In the newly added chapter, to make "every family its own board of health," the writer gives a superficial but over-positive view of the "germ theory," showing scant familiarity with accurate bacteriology or recent experiments in disinfection. Although he recommends a rather lavish use of corrosive sublimate, he has apparently never heard of the reinstatement of chlorinated lime among our disinfecting agents, and he retains a pristine preference for copperas and carbolic acid, the latter of which he prescribes in the proportion of an ounce to the pint of water for daily baths in convalescence from measles. "Typhoid microbes" are alleged specially to infest the large intestine; the "cholera microbe" is said to ripen out of the body and take the form of exceedingly minute spores which float in the air with great facility; while, to avert the danger from the "swarms" of microbes in phthisical sputa, it is urged that laws should be enacted to prohibit persons affected with consumption from expectorating in the street!

Climatology and Mineral Waters of the United States. By A. N. Bell, A. M., M. D., etc. New York: William Wood & Co., 1885. Pp. vii–386. [Wood's Library of Standard Medical Authors.]

The two subjects indicated in Dr. Bell's title are of equal scientific interest, but, for us at least, of unequal therapeutic importance. Our mineral waters are among the best in the world; our climates are among the worst; and, while our climates have been carefully studied in practical medicine, there is scarcely a subject that has been less adequately explored than that of American mineral waters. Dr. Walton's book ("The Mineral Springs of the United States and Canada") is the best monograph we possess upon the theme as yet. Dr. Bell's book, while full of interesting data of many kinds more or less related to his title, is not a systematic discussion either of our climates or of our mineral waters. Of 378 pages of text, but 68 (*passim*, between pp. 145 and 247) are given to the description of American springs, the descriptions generally including little more than the analysis of the waters, with an occasional citation describing the climate. The first duty of a book on mineral waters, that is intended, in Dr. Bell's words, to be "available for all," is to inform us whether establishments of any kind exist at the various springs described—whether, in a word, the physician can send his patient thither or not. Dr. Bell tells us nothing of this in any instance that we have noticed except in that of Saratoga, a place that is tolerably well known already. The analyses seem to be transcribed directly from Walton; and sometimes Walton's original text is quoted as Dr. Bell's, apparently through the mere momentum of transcription, as in the passage on p. 230, beginning, "Five other geysers," taken from p. 329 of Walton.

For the rest, the climatic portion of the book is made up of extended tables from the Signal Service publications, and of various data from physics, astronomy, geology, botany, life insurance, and the census. We must entirely dissent from Dr. Bell's conclusion (p. 376) that no climates possess "a higher degree of salubrity" than ours. With the exception of the climates of the Pacific slope, which are equable, all the climates of the United States are characterized, as Dr. T. M. Coan has said, by "rapid and violent changes in heat, atmospheric pressure, moisture, and electric tension." No argument from facts can make our eastern climate a good one.

Manuel pratique des maladies des fosses nasales et de la cavité naso-pharyngienne. Avec 53 figures dans le texte et 4 planches hors texte. Par le Dr. E. J. Moure, Professeur libre des maladies du larynx, des oreilles et du nez, Directeur de la "Revue mensuelle de laryngologie, otologie, et rhinologie," etc. Paris: Octave Doin, 1886.

This volume, as its name implies, is a practical manual for the use of students and practitioners in the department of rhinology. It is written in a characteristically clear and comprehensive style, and is well illustrated. The ground is thoroughly gone over, and several chapters are devoted to subjects not usually mentioned in similar works. The opinions of the author upon matters relating to treatment, representing as they do the views of an important section, will be read with much interest and by no means without profit. The illustrations are good and the form and typography of the book excellent.

Étude sur la pathogénie et l'anatomie pathologique de l'érysipèle. (Contribution à l'histoire des maladies infectieuses.) Par le Docteur Maurice Denucé, Interne des hôpitaux de Paris, etc. Paris, 1885. Pp. 15 to 168.

In this interesting contribution to the study of erysipelas the author has exhaustively considered the pathological anatomy, and in adopting the germ theory of the pathogenesis of the affection he has gone a step farther than his predecessors, in that he not only attributes the primary forms to bacterial infection, but regards the secondary, or systemic, processes that often accompany the disease as due directly to the same cause. So far as the local manifestations occurring at the site of original affection are concerned, Denucé is fully in accord with

Fehleisen, who, in a work on "The Ætiology of Erysipelas," published at Berlin in 1883, established their dependence on the presence of the *Streptococcus erysipelatus* in the tissues affected. But Fehleisen denied that the bacterial elements ever entered the general circulation, or that they could be the direct cause of secondary processes. Denucé seeks to establish for the secondary lesions the same causation as that of the primary. All the secondary changes, whether occurring in the lymphatics, in the mucous membranes, in the blood and its vessels, in the viscera, or in the nervous system, are traced directly to the invasion of the affected parts by streptococci. The writer's positions are supported by a large number of original investigations.

Der Torfmoos-Verband. Von H. Leisrink, Dr. Med., W. H. Mielck, Dr. Phil., und S. Korach, Dr. Med. Mit drei Abbildungen. Hamburg und Leipzig: Leopold Voss, 1884. Pp. iv–42.

This pamphlet on the use of Torfmoos (*Sphagnum acutifolium*, or Alpine moss) as a dressing for wounds is based upon considerable clinical experience, which is given in full. The work is divided into three parts, the first dealing with the botanical and pharmaceutical characters of the plant, the second being an experimental study of its effects, and the third giving an account of the cases in which it has been used. These cover nearly the whole range of surgical operations—resections of joints, tumors, ulcers, hernia, hydrocele, plastic operations, and cases of suppurating bubo. The effects seem to be exceedingly good and to warrant the high opinion in which the plant is held by the authors of the work.

BOOKS AND PAMPHLETS RECEIVED.

Contributions to Surgery and Medicine. The Principles of the Treatment of Fractures and Dislocations. By Hugh Owen Thomas. [Part VI.] London: H. K. Lewis, 1886. Pp. 104.

The Classification and Treatment of over Two Thousand Consecutive Cases of Ear Diseases at Dr. Sexton's Aural Clinic, New York Eye and Ear Infirmary. By Samuel Sexton, M. D., Aural Surgeon, and W. A. Bartlett, M. D., and Robert Barclay, M. D., Assistant Surgeons. Detroit: George S. Davis, 1886. Pp. 95. [The Physician's Leisure Library.]

New Medications. By Professor Dujardin-Beaumetz, Member of the Academy of Medicine of Paris, etc. Translated by E. P. Hurd, M. D., etc. With Appendices and Illustrations. In Two Parts. Detroit: George S. Davis, 1886. Pp. 128–129 to 320. [The Physician's Leisure Library.]

The Use of Electricity in the Removal of Superfluous Hair, and the Treatment of Various Facial Blemishes. By George Henry Fox, A. M., M. D., etc. Detroit: George S. Davis, 1886. Pp. 67. [The Physician's Leisure Library.]

A Manual of Inhalers. Inhalations and Inhalants and Guide to their discriminating Use in the Treatment of Common Catarrhal Diseases of the Respiratory Tract. By Beverley Robinson, M. D., etc. Detroit: George S. Davis, 1886. Pp. 72. [The Physician's Leisure Library.]

Du délire chez les dégénérés. Observations prises à l'asile Sainte-Anne, 1885–'86 (service de M. Magnan), par le Dr. M. Legrain, Ancien interne des asiles d'aliénés de la Seine, etc. Paris: aux bureaux du "Progrès médical," 1886. Pp. xi–290. [Prix, 5 fr.]

The Diseases of the Prostate: their Pathology and Treatment. Comprising the Jacksonian Prize Essay for the Year 1860. By Sir Henry Thompson, Surgeon Extraordinary to His Majesty the King of the Belgians, etc. Sixth Edition. Philadelphia: P. Blakiston, Son, & Co., 1886. Pp. xii–237.

Spasm in Chronic Nerve Disease; being the Gulstonian Lectures delivered at the Royal College of Physicians of London, March, 1886. By Seymour J. Sharkey, M. A., M. B. Oxon., F. R. C. P., etc. London: J. & A. Churchill, 1886. Pp. 99.

A Code of Rules for the Prevention of Infectious and Contagious Diseases in Schools. Being a Series of Resolutions passed by the Medical Officers of Schools Association, January 7, 1885. Second Edition. London: J. & A. Churchill, 1886.

The Paroccipital, a newly recognized Fissural Integer. By Burt G. Wilder, M. D., etc. [Reprinted from the "Journal of Nervous and Mental Diseases."]

Report of the Department of Health, City of Chicago, for the Year 1885.

On the Value of Brücke's Method for the Removal of Interfering Substances from Urine in testing for Glucose. By Edgar Moore Green. [Reprinted from the "American Chemical Journal."]

Report of the Proceedings of the Michigan State Board of Health. Regular Meeting, July 13, 1886.

Intra-cranial Hæmorrhage in its Medico-Legal Aspects. By John B. Lewis, M. D. [Reprinted from the Proceedings of the Connecticut Medical Society.]

El Problema de la Rabia, por el Doctor D. Gaspar Gordillo Lozano, Ex-alumno Interno por Oposicion de la Facultad de Medicina de Madrid.

Forty-third Annual Report of the Managers of the State Lunatic Asylum at Utica, for the Year 1885.

Intubation of the Larynx for Diphtheritic Croup. By E. Fletcher Ingals, A. M., M. D., etc. Chicago. [Reprinted from the "Journal of the American Medical Association."]

Progressive Muscular Atrophy beginning in the Legs. By J. B. Marvin, M. D., Professor of the Principles and Practice of Medicine and Clinical Medicine in the Kentucky School of Medicine. [Reprinted from the "American Practitioner and News."]

The Aim and Purpose of the Medical Man. The Annual Address to the Graduating Class of the Kentucky School of Medicine. By Professor J. B. Marvin, M. D., etc. Louisville.

The Peroneal Type of Progressive Muscular Atrophy; a Thesis for the Degree of M. D. in the University of Cambridge. By Howard H. Tooth, M. A., M. D., etc. London: H. K. Lewis, 1886. Pp. 43.

Hysterectomy for Removal of a Fibro-cystic Tumor. Ovariotomy with the History of a Case. By Robert T. Wilson, M. D., etc., Baltimore.

Medical Education and Medical Licensure. An Address delivered before the Twenty-third University Convention at Albany, July 9, 1885. By William H. Watson, A. M., M. D., Regent of the University of the State of New York. [Reprinted from the Report of the Regents to the Legislature.]

The Pathology and Treatment of Dropsy. By James Barr, M. D., L. R. C. S. Edin., etc. [Reprinted from the "Liverpool Medico-Chirurgical Journal."]

The Value of the Knee Phenomenon in the Diagnosis of Diseases of the Nervous System. By Philip Zenner, A. M., M. D., etc. [Reprinted from the "Journal of the American Medical Association."]

The Care of Eyes in Institutions for Children—Fourteen Years' Experience in Hospitals and Homes for Children, with Discussion. By William S. Little, A. M., M. D., etc. Philadelphia. [Reprinted from the "Polyclinic."]

Electrolysis in Gynæcology, with a Report of Three Cases of Fibroid Tumor successfully treated by the Method. By Franklin H. Martin, M. D., etc. Chicago. [Reprinted from the "Journal of the American Medical Association."]

A Contribution to the Study of Hay Fever (so called). By Beverley Robinson, M. D. New York. [Reprinted from the "Medical News."]

Miscellany.

Temporary Lying-in Hospitals.—It is a source of wonder, not to say shame, that there are not provided in more of our large cities temporary places of refuge for women who are taken in labor at an untoward moment. The newspapers frequently contain accounts of a birth on the street, at a railroad station, in a carriage, or even in an area, the latter usually being in the cases of homeless or dispossessed women. Such an event took place in Boston last week, and, instead of eliciting at least offers of assistance, it seemed to arouse, in the parties directly affected, feelings such as one might entertain toward a mangy cur who had taken refuge in one's vestibule. The story, which savors of inhumanity, is thus told by the "Boston Post": "Rose Dennis, a colored woman about twenty-five years of age, has been living in a room at No. 86 West Cedar Street, but was turned out, it is said. About six o'clock yesterday morning she experienced severe labor pains. A female friend of hers put her into a hack and went with her to the City Hospital. It was expected that the child would be born on the way. The hospital authorities refused to receive her, so back she went. When at the corner of Hancock and Mt. Vernon Streets the driver of the hack turned her out, as if she had been a small-pox patient. Things were in a pretty critical state just then, and, seeing the door of the basement of a house on Mt. Vernon Street open, she hurried in, lay down on a plank, and gave birth to a boy. Then her friend deserted her, and she might have died but for Policeman Powers, of Division 3, who discovered her, and at once went for a doctor. But Rose's troubles were not over by a good deal. The occupant of the house in the doorway of which she lay was perfectly frantic at the affair, and ordered the officers to put the poor woman out on the street, which they would not do. It being necessary to do something with her, the officers called upon the directors and overseers of the poor, No. 30 Pemberton Square, but they refused positively to have anything to do with the case. At last she found refuge with the child in the Chardon Street Home." The establishing of a few such institutions in every large city would lessen the sufferings of many poor women and might be the means of diminishing the number of infanticides, evidences of which are daily discovered in our large cities.

The Ninth International Medical Congress, according to a circular lately issued by the Executive Committee, will assemble in the city of Washington, the Capital of the United States, on Monday, September 5, 1887, at twelve o'clock noon, in accordance with the arrangements made at Copenhagen in August, 1884.

Patrons.—The President of the United States, the Hon. Grover Cleveland; the Secretary of State, the Hon. Thomas F. Bayard; the President of the Senate of the United States, the Hon. John Sherman; the Speaker of the House of Representatives of the United States, the Hon. John G. Carlisle.

Proposed Officers of the Congress.—President.—Nathan S. Davis, M. D., LL. D., Chicago, Illinois.

Vice-Presidents, as far as appointed.—McCall Anderson, M. D., London, England; Mr. Thomas Annandale, Edinburgh, Scotland; Professor Dujardin-Beaumetz, M. D., Paris, France; Cuthbert Hilton Golding Bird, M. D., London, England; Professor Carl Braun, M. D., Vienna, Austria; William Brodie, M. D., Detroit, Michigan; W. W. Dawson, M. D., Cincinnati, Ohio; Thomas M. Dolan, M. D., Halifax, England; F. R. Frazer, M. D., Edinburgh, Scotland; J. A. Grant, M. D., Ottawa, Canada; J. A. S. Grant, M. D., Cairo, Egypt; A. L. S. Gusserow, M. D., Berlin, Prussia; Dr. Hans Ritter von Hebra, Vienna, Austria; Dr. E. Klein, London, England; M. le Baron H. Larrey, Paris, France; Sir William MacCormac, London, England; Mr. George B. Macleod, Glasgow, Scotland; John S. McGrew, M. D., Honolulu, Hawaiian Islands; E. M. Moore, M. D., LL. D., Rochester, New York; Professor Von Monseil, Bonn, Prussia; Dr. Müller, Berlin, Prussia; William Murrell, M. D., London, England; Charles D. F. Phillips, M. D., M. R. C. S., London, England; Richard Quain, M. D., London, England; Tobias G. Richardson, M. D., New Orleans, Louisiana; M. P. Ricord, Paris, France; Professor John Burdon Sanderson, M. D., London, England; Lewis A. Sayre, M. D., New York; Dr. Mariano Semmola, Naples, Italy; Dr. Leopold Servais, Antwerp, Belgium; J. M. Toner, M. D., Washington, D. C.; Dr. P. G. Unna, Hamburg, Germany; Professor F. Winckel, Dresden, Saxony; the President of the American Medical Association; the Surgeon-General of the United States Army; the Surgeon-General of the United States Navy.

Secretary General.—John B. Hamilton, M. D., Supervising Surgeon-General of the United States Marine-Hospital Service.

Treasurer.—E. S. F. Arnold, M. D., M. R. C. S., Newport, Rhode Island.

Chairman of the Finance Committee.—Richard J. Dunglison, M. D., Philadelphia, Pennsylvania.

Chairman of the Executive Committee.—Henry H. Smith, M. D., LL. D., Philadelphia, Pennsylvania.

Chairman of the Committee of Arrangements.—A. Y. P. Garnett, M. D., Washington, D. C.

Associate Secretaries of the Congress.—William B. Atkinson, M. D., Philadelphia, Pennsylvania; G. B. Harrison, M. D., Washington, D. C.

The Congress will consist of such members of the regular medical profession as shall have registered and taken out their ticket of admission, and of such other scientific men as the Executive Committee of the Congress shall deem it desirable to admit. The books for the registration of members will be open from 9 A. M. to 5 P. M., on Thursday, September 1, 1887, and on each subsequent day during the session, under the charge of the "*Reception Committee.*" Any member desiring to anticipate this registration can apply by letter to the Secretary General and forward his dues, with his address in full, when a receipt will be returned. The dues of membership for residents of the United States will be ten dollars. There will be no dues for members residing in other countries. Each member will be entitled to receive a copy of the "Transactions" of the Congress, when published by the Executive Committee. The general sessions of the Congress will be devoted to the transaction of business and addresses and communications of general scientific interest, by members appointed by the Executive Committee. A printed programme of the sessions will be presented to each member on registering. A printed "Order of Business" for each day will also be issued. The work of the various sections will be directed by the president of the section, and the order will be published in a daily programme for each section. Questions and topics that have been agreed on for discussion in the sections shall be introduced by members previously designated by the titular officers of each section. Members who shall have been appointed to open discussions shall present to the secretaries of the section, in advance, statements of the conclusions which they have formed as a basis for the debate. Brief abstracts of papers to be read in the sections shall be forwarded to the secretaries of the proper section on or before *April 30, 1887.* These abstracts shall be treated as confidential communications, and shall not be published before the meeting of the Congress. Papers relating to topics not included in the list of subjects proposed by the officers of the sections may be accepted after April 30, 1887, and any member wishing to introduce a topic not on the regular lists of subjects for discussion shall give notice of the same to the Secretary General, at least twenty-one days before the opening of the Congress. The titular officers of each section shall decide as to the acceptance of such proposed communications and the time for their presentation. No communication shall be received which has been already published or read before a society. The official languages of the Congress shall be English, French, and German. Each paper or address shall be printed in the "Transactions" in the language in which it was presented. Preliminary abstracts of papers and addresses shall also be printed in the language in which each is to be delivered. All discussions shall be printed in English. The officers of the Congress and the officers of the sections, including all foreign officers, will be nominated to the Congress by the Executive Committee, at the opening of the first session. A partial list of the officers to be nominated (except the members of Council of the different sections, the list of whom is at present imperfect) is offered herewith.

The Executive Committee cordially invites members of the regular medical profession and men eminent in the sciences collateral to medicine, in all countries, to participate, in person or by papers. Communications relating to appointments for papers to be read in the Congress should be addressed to Dr. John B. Hamilton, Secretary General of the Ninth International Medical Congress, Washington, District of Columbia. All questions or communications connected with the business of the Executive Committee should be addressed to Dr. Henry H. Smith, Chairman of the Executive Committee of the Ninth International Medical Congress, Philadelphia, Pennsylvania. Gentlemen named in any position in the Congress are requested to notify the Chairman of the Executive Committee, as soon as practicable, of any error in the name, title, or address in this circular.

Ladies in attendance with members of the Congress, and those invited by the "Reception Committee," may attend the general sessions of the Congress when introduced by a member. They will also be invited to attend the social receptions. The Executive Committee reserves the right to invite distinguished persons to any or all the meetings of the Congress. The attendance of medical students and others interested in the work of the various sections or in the general addresses delivered in the Congress will be permitted, on the recommendation of the Secretary General or the officers of a section, on their taking out from the Registration Committee a general ticket of admission, fee one dollar; but such persons can not take part in the proceedings.

All communications and questions relating to the special business of any section must be addressed to the president or one of the secretaries of that section. As many details of the Congress and numerous appointments of officers are yet to be completed, other circulars will be issued from time to time, as circumstances may demand. The following is the list, as at present completed:

Executive Committee of the Congress.—Henry H. Smith, M. D., LL. D., *Chairman;* N. S. Davis, M. D., LL. D., John B. Hamilton, M. D., E. S. F. Arnold, M. D., Richard J. Dunglison, M. D., *Secretary;* Abram B. Arnold, M. D., William T. Briggs, M. D., DeLaskie Miller, M. D., Ph. D., James F. Harrison, M. D., F. H. Terrill, M. D., William H. Pancoast, M. D., John H. Callender, M. D., Alonzo B. Palmer, M. D., LL. D., J. Lewis Smith, M. D., E. Williams, M. D., S. J. Jones, M. D., LL. D., William H. Daly, M. D., A. R. Robinson, M. D., Joseph Jones, M. D., Albert L. Gihon, M. D., John P. Gray, M. D., LL. D., Jonathan Taft, M. D., Frederick S. Dennis, M. D., A. Y. P. Garnett, M. D.

Presidents of Sections.—General Medicine: Abram B. Arnold, M. D., Baltimore, Md. General Surgery: William T. Briggs, M. D., Nashville, Tenn. Military and Naval Surgery and Medicine: Henry H. Smith, M. D., LL. D., Philadelphia, Pa. Obstetrics: DeLaskie Miller, M. D., Ph. D., Chicago, Ill. Gynæcology: James F. Harrison, M. D., University of Virginia, Va. Therapeutics and Materia Medica: F. H. Terrill, M. D., San Francisco, Cal. Anatomy: William H. Pancoast, M. D., Philadelphia, Pa. Physiology: John H. Callender, M. D., Nashville, Tenn. Pathology: Alonzo B. Palmer, M. D., LL. D., Ann Arbor, Mich. Diseases of Children: J. Lewis Smith, M. D., New York, N. Y. Ophthalmology: E. Williams, M. D., Cincinnati, Ohio. Otology: S. J. Jones, M. D., LL. D., Chicago, Ill. Laryngology: William H. Daly, M. D., Pittsburgh, Pa. Dermatology and Syphilis: A. R. Robinson, M. D., New York, N. Y. Public and International Hygiene: Joseph Jones, M. D., New Orleans, La. Medical Climatology and Demography: Albert L. Gihon, M. D., U. S. Navy. Psychological Medicine and Nervous Diseases: John P. Gray, M. D., LL. D., Utica, N. Y. Dental and Oral Surgery: Jonathan Taft, M. D., Cincinnati, Ohio.

Vice-Presidents of Sections.—General Medicine: W. W. Cleaver, M. D., Kentucky; J. A. Octerloney, M. D., Kentucky; P. G. Robinson, M. D., Missouri; T. F. Rochester, M. D., New York; Preston B. Scott, M. D., Kentucky. General Surgery: Professor Filanus, Holland; Moses Gunn, M. D., Illinois; J. W. Hamilton, M. D., Ohio; W. H. Hingston, M. D., Canada; James M. Holloway, M. D., Kentucky; J. C. Hutchison, M. D., New York; N. S. Lincoln, M. D., District of Columbia; Donald MacLean, M. D., Michigan; Donald Macrea, M. D., Iowa; M. Storrs, M. D., Connecticut. Military and Naval Surgery and Medicine: C. J. Cleborne, M. D., United States Navy; E. H. Gregory, M. D., Missouri; Frank H. Hamilton, M. D.,* New York; W. T. Hord, M. D., United States Navy; Frederick Hyde, M. D., New York; G. L. Porter, M. D., Connecticut; W. E. Taylor, M. D., United States Navy; Edward Warren-Bey, M. D., France; B. A. Watson, M. D., New Jersey. Obstetrics: Gustav Braun, M. D., Austria; P. Budia, M. D., France; J. Galabin, M. D., England; John Goodman, M. D., Kentucky; W. M. Knapp, M. D., Nebraska; R. Lowry Sibbet, M. D., Pennsylvania; Isaac E. Taylor, M. D., New York. Gynæcology: N. Bozeman, M. D., New York; Henry O. Marcy, M. D., Massachusetts; T. A. Reamy, M. D., Ohio; H. R. Storer, M. D., Rhode Island. Therapeutics and Materia Medica: Henry M. Field, M. D., New Hampshire; Albert Frické, M. D., Pennsylvania; George Gray, M. D., Ireland. Anatomy: C. W. Kelly, M. D., Kentucky; Samuel Logan, M. D., Louisiana. Physiology: [Blank.] Pathology: Andrew Fleming, M. D., Pennsylvania; J. B. Johnson, M. D., Missouri; Henry F. Lyster, M. D., Michigan. Diseases of Children: William B. Atkinson, M. D., Pennsylvania; William G. Booker, M. D., Maryland; William H. Day, M. D., England; Dr. Cadet de Gassicourt, France; Dr. J. Grancher, France; Dr. Edward Henoch, Prussia; Adoniram B. Judson, M. D., New York; J. P. Oliver, M. D., Massachusetts; Eustace Smith, M. D., England; Charles West, M. D., England; Joseph E. Winters, M. D., New York. Ophthalmology: A. W. Calhoun, M. D., Georgia; J. J. Chisolm, M. D., Maryland; P. D. Keyser, M. D., Pennsylvania; Dudley S. Reynolds, M. D., Kentucky. Otology: [Blank.] Laryngology: M. F. Coomes, M. D., Kentucky; J. H. Hartman, M. D., Maryland; J. O. Roe, M. D., New York; E. L. Shurly, M. D., Michigan; G. V. Woolen, M. D., Indiana. Dermatology and Syphilis: James M. Keller, M. D., Arkansas; John V. Shoemaker, M. D., Pennsylvania; George Thin, M. D., London, Eng. Public and International Hygiene: A. Nelson Bell, M. D., New York; John Berrien Lindsley, M. D., Tennessee; J. N. McCormack, M. D., Kentucky; J. F. Y. Paine, M. D., Galveston, Texas; Benjamin W. Richardson, M. D., England; John Simon, England; J. W. Thudichum, M. D., England. Medical Climatology and Demography: Dr. A. Chervin, Paris, France; Traill Green, M. D., Pennsylvania; John H. Hollister, M. D., Illinois. Psychological Medicine: Julius Althaus, M. D., England; R. H. Chase, M. D., Pennsylvania; Eugene Grissom, M. D., North Carolina; John C. Hall, M. D., Pennsylvania; P. A. Hooper, M. D., Arkansas; J. S. Jewell, M. D., Illinois; S. S. Schultz, M. D., Pennsylvania. Dental and Oral Surgery: W. W. Allport, M. D., Illinois; S. W. Dennis, M. D., California; C. L. Ford, M. D., Michigan; H. L. McKellops, M. D., Missouri; A. T. Metcalf, M. D., Michigan; W. H. Morgan, M. D., Tennessee; A. L. Northrop, M. D., New York; L. D. Shepard, M. D., Massachusetts.

Secretaries.—General Medicine: J. W. Chambers, M. D., Baltimore, Md. General Surgery: Dudley, P. Allen, M. D., Cleveland, Ohio; Carl Mayne, M. D., Germany; J. R. Weist, M. D., Richmond, Ind.; A. H. Wilson, M. D., South Boston, Mass. Military and Naval Surgery and Medicine: J. McF. Gaston, M. D., Atlanta, Ga.; E. A. Wood, M. D., Pittsburgh, Pa. Obstetrics: A. Charpentier, M. D., Paris, France; T. Felsenreich, M. D., Vienna, Austria; W. W. Jaggard, M. D., Chicago, Ill.; John Williams, M. D., London, Eng. Gynæcology: Ernest W. Cushing, M. D., Boston, Mass. Therapeutics: Frank Woodbury, M. D., Philadelphia, Pa. Anatomy: Henry Morris, M. D., Philadelphia, Pa. Physiology: R. W. Bishop, M. D., Chicago, Ill. Pathology: H. M. Biggs, M. D., New York, N. Y.; I. N. Hines, M. D., Cleveland, O. Diseases of Children: Dillon Brown, M. D., New York. Ophthalmology: S. C. Ayres, M. D., Cincinnati, O. Otology: S. O. Richey, M. D., Washington, D. C. Laryngology: William Porter, M. D., St. Louis, Mo. Dermatology: W. T. Corlett, M. D., Cleveland, O.; F. E. Daniel, M. D., Austin, Texas. Public and International Hygiene: G. H. Rohé, M. D., Baltimore, Md.; Walter Wyman, M. D., U. S. Marine-Hospital Service, New York, N. Y. Climatology and Demography: Charles Denison, M. D., Denver, Col.; James F. Todd, M. D., Chicago, Ill. Psychological Medicine: E. D. Ferguson, M. D., Troy, N. Y.; E. Landolt, M. D., Paris, France. Dental and Oral Surgery: Edward A. Bogue, M. D., New York, N. Y.; S. F. Rehwinkle, M. D., Chillicothe, O.

Committee of Arrangements, Washington, D. C.—Chairman, A. Y. P. Garnett, M. D. Vice-Chairman, J. M. Toner, M. D. Secretary, C. H. A. Kleinschmidt, M. D. Treasurer, D. C. Patterson, M. D.

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* Deceased.

Committee on Congressional Legislation.—Dr. A. Y. P. Garnett, Chairman.

Committee on Finance.—Dr. G. L. Magruder, Chairman.

Committee on Printing.—Dr. J. B. Hamilton, Chairman.

Committee on Reception.—Dr. J. M. Toner, Chairman.

Committee on Entertainments.—Dr. N. S. Lincoln, Chairman.

Committee on Transportation.—Dr. J. W. H. Lovejoy, Chairman.

Committee on Place of Meeting for Congress and Sections.—Dr. D. C. Patterson, Chairman.

Adulterated Poison.—A press dispatch says " there is some good in adulteration after all," in the opinion likely to be held by a Pennsylvania man who lately attempted suicide with Paris green, for the physician who was called to him is reported to have said that he could not have saved him if the poison had not been adulterated.

Corpulency and the Ingestion of Liquids.—Mr. W. M. Williams says, in the " Gentleman's Magazine ": " The question whether water is fattening or otherwise has been much discussed. Formerly it was generally asserted that the victims of obesity should mortify the flesh and reduce the fat by abstaining as much as possible from liquids and remaining in a continual state of thirst. Latterly the opposite has been affirmed, and I am told that a reduction of weight is one of the results claimed by 'the hot-water cure,' provided always the water is taken as hot as possible, painfully hot, and in great quantities. Experiments have been made in Paris by Dr. Debove which controvert both these doctrines. These experiments indicate that, provided the same amount of solid food is taken, large quantities of water make a man neither thinner nor fatter. They were carefully made on a friend who took weighed quantities of food daily, and while these remained equal doubling the quantity of water had no measurable effect on the weight of the body. Still, it is quite possible that the old theory of thirst cure and the new theory of hot-water cure may both be correct. Both violate the natural conditions of health. Scalding hot water, like tea or coffee, or grog of similar temperature, unquestionably injures the teeth, stomach, and other organs concerned in the early stages of digestion, and it is very probable that deficiency of liquid impedes the latter stages, whereby the chyme, by the aid of the digesting fluids, becomes converted into chyle and blood. A fat man may easily become thinner by injuring his health. 'Bantingism' is dangerous, as many who have fairly tried it can prove. The difficult problem is to reduce the fat without reducing the strength at the same time. A skillful trainer will undertake to bring any man down to his 'fighting weight,' *i. e.*, to the best condition for violent exertion, but as soon as the discipline of the trainer is relaxed the obesity, when constitutional, returns, and a long continuance of high training is murderous. Perhaps the old prescription, 'Keep your mouth shut and your eyes open,' when followed with judicious limitations, is the best. Eat less, sleep less, and walk more are safe injunctions, provided they are obeyed in moderation. The fat man who uses malt liquor as a daily beverage deserves to be buried under cross-roads at midnight, according to the ancient modes of degrading the willful perpetrators of *felo de se*."

Gout and Corpulency.—Dr. Burney Yeo says, in the " Nineteenth Century ": " A very eminent *confrère* has asked me to define gout. I had often thought over this difficulty, and I was therefore prepared with an answer, so I defined gout as disturbed retrograde metamorphosis! This seems a very pedantic phrase, but it is capable of explanation, and, when examined, it will, I think, be found to be nearly, if not altogether, co-extensive with the meaning of gout. For the perfection of healthy life it is requisite that certain changes (metamorphoses), constructive and destructive (retrograde), should take place in the body with perfect regularity and uniformity. Constructive metamorphosis (after growth is completed) is concerned in maintaining the fabric of the animal frame in its due integrity; destructive (retrograde) metamorphosis is concerned in carrying away, completely and quietly, the results of the incessant use and wear of the fabric. This is what is meant by the words 'tissue change,' of so frequent occurrence in every attempted explanation of the action of baths and waters. If there is a disturbance in the constructive changes, the perfection of the fabric suffers, and loss of strength must follow; if there is a disturbance in the destructive changes, the injury to the health of the body may not be so immediately apparent, but they will be felt sooner or later, and in proportion to the gravity of the disturbance. Mere excess of food may be the cause of some of these disturbances, or an improper method of feeding. Thus it is easy to understand how corpulence arises. Something is regularly taken into the system which is not needed for construction or maintenance. If in the 'retrograde metamorphosis' this excess were got rid of in a regular and normal manner, nothing remarkable would arise. But in some organizations there is a tendency not to turn this excess into substances which can readily be discharged from the body, but to throw it on one side, as it were, within the body in the form of fat, probably a provision of nature for storing up excess of food in a readily convertible form in anticipation of a season when food may be difficult to procure, for fat disappears rapidly enough when persons are deprived of food, and those who profess that they get fat 'on nothing' would soon be undeceived if they were seriously to try this painful experiment. But a tendency to disturbance of 'retrograde metamorphosis' may be independent of excess or error in the matter of feeding, and depend on an inherited peculiarity, although aggravated undoubtedly and called into activity frequently by excesses and errors of diet. The tendency both to gout and corpulence is very commonly inherited and often co-exists in the same person."

Pasteur's Critics.—A Paris correspondent of the London " Standard " says: " After having been the idol of an hour, and after seeing the French in their enthusiasm subscribe a large sum of money for the establishment of an institution which is to bear his name, M. Pasteur is now becoming the object of virulent attacks. It is chiefly among the radicals, and those whose scientific knowledge is very limited, that M. Pasteur's detractors are to be found. A certain number of doctors have, it is true, recently pronounced against the efficacy of his treatment against hydrophobia; but the great majority of the medical faculty reserve their judgment for the present. Dr. Lallier, one of the medical celebrities of Paris, in a long conversation I had with him on the subject, spoke in the highest terms of the patient researches which have already enabled M. Pasteur to make valuable discoveries. As for M. Pasteur's good faith, Dr. Lallier has not the slightest doubt, for he is well acquainted with him, and is quite sure that he would never affirm anything unless he was himself perfectly convinced of its truth. Though Dr. Lallier admits that the inoculations appear to have protected those who followed M. Pasteur's treatment from hydrophobia, at least in the great majority of cases, he nevertheless holds it necessary not to pronounce definitely in favor of that treatment, and for the following reasons: First, because sufficient time has not yet elapsed since the first person was inoculated by M. Pasteur to prove that the germ of hydrophobia has been destroyed or rendered innocuous. But that is not Dr. Lallier's main reason for refusing to pronounce on M. Pasteur's treatment. He pointed out to me that there was an obscure point which rendered that treatment a mystery. When a person is vaccinated against small-pox a virus is introduced into his system which gives him the disease in an attenuated form. The vaccine, to use the word commonly employed, 'takes,' and the vaccinated person has a certain amount of fever. In the case of persons being vaccinated against small-pox, after they have already been attacked by that disease, Dr. Lallier affirms that till now there has been no proof forthcoming to show that the intensity of the attack of small-pox is diminished by the vaccination. M. Pasteur's treatment, therefore, puzzles him, for, when inoculated by M. Pasteur, the patient has only the germ of hydrophobia in his system, but the liquid substance which is introduced into his body has no apparent effect—that is to say, the patient is not in the least ill, and does not suffer from even the attenuated symptoms of hydrophobia. By vaccination the patient is given small-pox in a mild form when he has not the germ of that disease; whereas when a person is inoculated against hydrophobia he has already the germ of that disease, and is not given it in any form whatever."

The late Dr. Frank H. Hamilton.—At a meeting of the Chicago Medical Society, held August 16th, the following preambles and resolution, offered by Dr. Truman W. Miller, were unanimously passed:

Whereas this society has learned with deep regret of the death of Dr. Frank Hastings Hamilton, of New York; and

Whereas in his death the United States has lost one of its most distinguished surgeons and one of its ablest teachers, one of the purest patriots, and in his private life one of the most amiable men; therefore be it

Resolved by this society that we hereby give public testimony to the many virtues of the deceased, and that we tender his family the assurance of the profound sympathy of this society with them in the hour of their affliction; and that an engrossed copy of these resolutions be furnished them, and a copy spread upon the records.

THERAPEUTICAL NOTES.

A Local Application for Strumous Swellings in Infants.—Descroizilles (" Union méd.," August 3, 1886) suggests the following:

Common salt	1⅓ ounce;
Sulphate of magnesium	½ "
Tincture of iodine	15 grains;
Distilled water	5 ounces.

To be applied on compresses.

A Pill for Hæmoptysis.—Gueneau de Mussy (" Nouveaux remèdes," July 15, 1886) is credited with this formula:

Extract of rhatany	1 drachm;
Ergot	45 grains;
Powdered digitalis	8 "
Extract of hyoscyamus	4 "

Divide into twenty pills, of which four or five should be taken in the course of twenty-four hours.

The Treatment of Herpes Præputialis.—Fournier (*Ibid.*) recommends bathing the herpetic ulcers several times daily with a solution consisting of equal parts of Labarraque's solution and water. After each application the following powder is to be used:

Subnitrate of bismuth	45 grains;
Calomel, Oxide of zinc, each	15 "

An Application for Otitis Externa.—Miot (*Ibid.*) applies two or three times daily the following solution:

Boric acid	15 grains;
Pure glycerin	2½ drachms;
Hydrochloride of cocaine	15 grains.

A Peptogenous Elixir.—This preparation, suggested by Dujardin-Beaumetz (*Ibid.*), has the following composition:

Dextrin	2½ drachms;
Rum	5 "
Syrup	2 ounces;
Water	4 "

A Mixture for Chronic Pertussis.—Roger (*Ibid.*) employs this preparation:

Gum ammoniæ	2 to 3 grains;
Syrup of orange-flowers	6 drachms;
Infusion of serpentaria	2½ ounces.

Dose, a teaspoonful at intervals more or less frequent according to the condition of the patient and the action of the remedy. When the expectoration becomes abundant, turpentine is prescribed. The chest is rubbed with an ointment containing a drachm of extract of aconite or conium to an ounce of lard.

An Application for Ivy Poisoning.—Dr. H. Hahn, writing to the " Therap. Gazette " for August, states that he has employed the following remedy with success:

Carbolic acid	1 drachm;
Strong ammonia-water	½ "
Olive-oil	3 ounces.

Apply every two or three hours on compresses. If there is excessive pain, an ice-bag may be placed over the compress.

Dr. Buzzell, in a letter to the same journal, recommends for a similar purpose this formula:

Olive-oil	8 ounces;
Sulphate of zinc	½ ounce.

Shake thoroughly and apply to the affected surface on old linen cloths. Two applications will generally be sufficient.

Potassium Permanganate in Amenorrhœa.—Dr. Marshall, of San Francisco (*Ibid.*), after employing this drug in fifty cases of amenorrhœa, has arrived at the following conclusions: 1. The permanganate acts satisfactorily in about seventy per cent. of the "selected cases." 2. It should be administered one or two hours *after* eating. The disagreeable action on the stomach may be relieved by combining it with the following:

Oxalate of cerium	1 grain;
Hydrochloride of cocaine	⅙ "
Subnitrate of bismuth	5 grains;
Powdered ipecac	$\frac{1}{60}$ grain.

The writer also states that this drug has a marked tonic effect, and generally causes mental exhilaration.

Chloroform-water as an Antifermentative.—Beurmann (" Zeitschrift für Therapie "; " Therap. Gazette ") finds this preparation of great value as a local anæsthetic and antifermentative in gastric disorders. It is also recommended in the vomiting of pregnancy, and as a vehicle for the administration of sedatives and narcotics, as below:

Diluted chloroform-water	4 ounces;
Orange-flower water, Syrup, each	1 ounce.
Hydrochloride of morphine	½ grain.
Potassium bromide	15 grains.

A dessertspoonful several times daily, as required.

Also:

Diluted chloroform-water	4 ounces;
Peppermint-water, Syrup, each	1 ounce;
Salicylate of sodium	1 drachm.

Dose, one tablespoonful.

The Treatment of the Night-sweats in Phthisis.—Abletsoff, according to the " Lancet " (July 3, 1886) has made a careful study of the effect of various drugs upon night-sweats. He finds that hydrochloride of pilocarpine, even in doses of from one sixth to one eighth of a grain, not only fails to diminish the sweating in most cases, but renders the patient's condition worse, by reason of the gastro-intestinal irritation which it produces. Neither does this drug possess the superior expectorant properties that have been alleged for it. Duboisine, picrotoxin, and homatropine certainly reduce the amount of perspiration; but, as the use of the two former drugs may be followed by unpleasant effects, homatropine is to be preferred in phthisical cases.

Salicylate of Cocaine in Asthma.—Mosler (" Deutsch. med. Woch.," 1886, No. 11) reports several cases of asthma which were treated successfully with hypodermic injections of this compound. The paroxysms were almost invariably shortened or prevented. The simultaneous administration of bromide of ammonium augmented the action of the cocaine. In one instance prolonged vertigo followed an injection.

Rhodan Soda.—This powerful drug has been recently studied by Paschkis, the results of whose observations appear in Schmidt's " Jahrbücher " (April, 1886). Its action is somewhat similar to that of strychnine, although less rapid. Five c. c. of a twenty-per-cent. solution injected under the skin of a frog caused prolonged tetanic convulsions, with inhibition of the respiratory and cardiac movements. Three drops of a three-per-cent. solution in contact with the exposed heart of the same animal produced a gradual slowing of the beat until the action ceased entirely, to be renewed on the application of a solution of atropine. When injected into the arteries of mammals, it caused a marked and permanent increase in the blood-pressure.

Hoang-nau as a Remedy for Hydrophobia.—Barthélemy (" Bull. gén. de thérap."; " Therap. Gazette ") states that this drug has long been ued in Tonkin in the treatment of hydrophobia, and apparently with some degree of success, if administered before the onset of the malady. The writer professed to have warded off the attack in twenty-four cases, the premonitory symptoms being clearly marked in two patients. Lesserteur has administered hoang-nau to one hundred persons who had been bitten by rabid dogs, and in no instance did hydrophobia appear. The treatment was continued for twelve days, fifteen grains of the drug being administered daily. Barthélemy infers that hoang-nau, when given during the incubative period, may produce certain changes in the nerve-tissue sufficient to prevent the development of the peculiar virus.

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Lectures and Addresses.

LECTURES ON
THE DIAGNOSIS AND TREATMENT OF DISEASES OF THE CHEST.

DELIVERED BEFORE THE ASCLEPION CLUB,

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LECTURE III.

The Diagnosis and Treatment of Diseases of the Pleura.

IN the diagnosis of diseases of the pleura, as in the diagnosis of other local diseases, it is necessary to ascertain, first, the condition of the affected organ, and, second, its effect upon the remainder of the body. In other words, the diagnosis should be both local and general. The local diagnosis refers to the condition of the pleura itself; that is, to the character and extent of the morbid process and the condition of the respiratory apparatus—the lungs and the bronchial tubes. In the general diagnosis of diseases of the pleura we must consider the constitutional state of the patient, the existence or non-existence of fever, the condition of the nervous vascular and digestive apparatus, and the presence or absence of any cachexia or constitutional predispositions.

In the present lecture we will dwell only upon the diagnosis and treatment of the inflammatory diseases of the pleura. The simplest of these is acute pleurisy with serous effusion. Without taking time to go into the ordinary details of the diagnosis, which are known to everybody, we will at once turn our attention to some of the more unusual manifestations, and some which baffle the physician and lead him to form an incorrect opinion.

The first of these misleading symptoms is pain located at an unusual point. It sometimes occurs that a patient with acute pleurisy, instead of referring the pain to the side upon which the disease exists, complains of uneasiness or suffers pain in the epigastric region, or even lower in the abdomen. This is particularly misleading, as the occurrence of a fever, not preceded by a chill, with the anorexia and the evidences of gastric catarrh, accompanied by pain in the epigastrium, would naturally suggest to the mind of the observer the existence of some abdominal disease, and this has actually occurred in several instances that have come under my notice.

One was the case of a youth, fifteen years old, who was seized with a severe fever, with vomiting and violent pain in the abdomen, particularly in its upper region; the fever intermitted, and the general appearance of the patient was such as to lead the gentleman who attended him to suppose that he had to deal with an intermittent fever, with the gastralgia which frequently accompanies it. In spite of treatment, which was intelligently adapted to the disease with which the patient was supposed to be suffering, he continued to grow worse, until finally the evident existence of dyspnœa led to an exploration of the chest, when it was found that a large amount of fluid had accumulated in the right pleural cavity. When the diagnosis of pleurisy was finally made, the condition of the boy was such that the attending physician decided to wait for a few days until he recruited, or until he could overcome some of the unfavorable symptoms which existed, before attempting any further exploration by means of the aspirator. But the patient, after some apparent improvement, which had gone on for three or four days, became suddenly very much worse, and at the time that I saw him he was moribund, the fluid in the pleural cavity was purulent, and a perforation of the lung had occurred, with the admission of air to the pleural cavity, which was followed by a putrefactive decomposition of the pus, septicæmia, and death.

In another case, the patient, who was admitted to St. Mary's Hospital in the year 1884, was a female domestic, who had been suffering from a continued fever for two or three weeks before admission to the hospital; the abdomen had been distended and the stomach very irritable, with frequent vomiting, and she had suffered from the most intense pain in the epigastric region. This epigastric pain, with the fever and great abdominal distension, had in this case, as in the one previously cited, led the medical attendant to make a diagnosis of some inflammatory abdominal disease; the exact diagnosis I do not now remember. On palpation of the abdomen, we discovered very great distension, with much pain and tenderness above the umbilicus, and, in the right iliac region, upon deep pressure, a distinct feeling, as of a tumor or some solid body. I examined her at the request of Dr. Byrne, into whose department she was admitted, and, in addition to these signs, I found that the right pleural cavity contained as much fluid as it could possibly hold—sufficient to displace the mediastinum and carry the apex of the heart an inch to the left of the mammillary line. A large quantity of the fluid was abstracted by means of the aspirator, and after several weeks the pleurisy was cured, but the patient remained in the hospital, and subsequently died from the pressure effects of two ovarian tumors.

Other cases might be narrated to illustrate the same point, but these two are sufficiently striking to serve the purpose. It is an error which we are all liable to make, but which can certainly be avoided by practicing a close observation of our patients. The signs to be depended upon which should attract our attention to this condition are, first, that there will in such cases almost always be some cough, even though it be slight, and that the cough has the peculiar character which we observe in this disease; it is what is known as the suppressed cough. It is painful, and the patient makes an effort to restrain it, so that the impression which it conveys to one who hears it or sees it is exactly that which its name indicates—that of being suppressed.

In the second place, there will inevitably be dyspnœa. If the patient is carefully observed, it will be seen that the respirations are increased in frequency, and the increase is greater than that which would normally accompany the amount of fever present, if it were the fever of any other than thoracic disease. This will at once lead the careful diagnostician to make an exploration of the chest, and that investigation would, of course, lead at once to the detection of the true difficulty. If the pain is located in any other abnormal position, as, for instance, in the neck, the same rule of diagnosis holds true; the cough and the dyspnœa should always lead the observer to make a physical exploration of the chest.

Pleurisy is frequently overlooked through lack of a sufficiently thorough examination of the chest. There are many cases in which the pain is not very acute, and in which a sufficient amount of bronchitis accompanies the pleuritic affection to direct the attention of the examiner rather to the upper than to the lower portion of the chest. The examination is then conducted with the idea of detecting some bronchial disease, and only the upper, and may be the anterior, portion of the chest is examined, while the more important lesion, which exists in the lower and posterior regions of the thorax, is entirely overlooked.

There is no specific indication to be pointed out, and the only means of avoiding such errors, which not infrequently occur, is by making it an invariable rule, when we examine a chest, to examine it thoroughly. I have myself formerly in several instances overlooked the existence of pleurisy for some time, until my attention was finally called to it by the fact that the pain continued to get worse, or did not yield to the method of treatment which I was unintelligently employing; and I have finally adopted the rule, in all cases of examination of the chest, particularly where the patient is at his house and is sufficiently ill to remain in bed, to examine the lower and posterior portions of the thorax.

It is not usually necessary to have the clothing removed and go through a minute investigation to simply ascertain whether there is any disease or not. Careful listening through light clothing, though not, of course, through corsets or starched under-clothing, will usually be sufficient to inform the physician as to the existence or non-existence of disease. If any abnormity in the respiration is detected, a more thorough examination may be made. Since adopting this rule I am not aware of having overlooked any case of pleurisy, either active or latent.

There are, furthermore, cases of pleurisy with effusion which are unaccompanied by pain, or in which the pain is so slight and elicits so little complaint from the patient that it goes entirely unobserved. These cases of so-called *latent* pleurisy occur in people who are not confined to their beds, frequently not even to the house, but who for some time pursue their ordinary avocations. They feel sick, usually have a slight cough, though not always, have a sense of undefined distress, something which they are unable to describe to the physician — I suppose the darky's term, "misery," would express it as well as anything—but are usually apt, in describing their symptoms, to allude to the fact that they are short of breath upon exertion. In some of these cases the dyspnœa is not sufficiently great to give rise to any perceptible increase in the frequency of the respiratory movements when the patient is at rest, and, unless careful attention is paid to the account which he gives, this element of dyspnœa may be entirely overlooked. The only rule which I can give by which to avoid the possibility of a mistake in dealing with this variety of pleurisy is that already mentioned—namely, in examining the chest, always to examine it thoroughly.

It has occurred to me two or three times to have a patient visit me at my office complaining of some ill-defined feeling of sickness, with possibly a little cough, headache, and inability to do his work, in whom I did not suspect the existence of a pleuritic effusion until after two or three visits, when, having found that my remedies were of no avail, I made a more thorough examination, and detected the presence of the fluid. There is one remark which such patients frequently make, which might attract our attention, even if they do not speak of being short of breath, and that is that *they get tired very easily.*

I have found as a matter of experience that, if persons who are apparently in pretty good health, whose bodies are well nourished, and whose color is good, complain of getting tired easily at their work, it is very probable that they are suffering from some cardiac or pulmonary disturbance. Of course, nervous exhaustion, which may give rise to the same symptom, is usually very easily excluded. The feeling of getting tired under an amount of work which we know is easily within the muscular strength of the individual is due either to some disturbance of the function of the heart, in consequence of which the circulation of the blood is impeded, or to a derangement of the respiratory function involving a defective aëration of the blood. In such cases dyspnœa always exists, but is frequently interpreted by the patient as fatigue. The laity do not always distinguish between muscular weakness and shortness of breath.

In this latent form of pleurisy with effusion it is particularly desirable that no mistake should be made, for, while it may be that many cases run their course and recover without ever being recognized, still it frequently happens that it becomes chronic, and is only discovered when irreparable damage has been done. It is not an uncommon occurrence for such patients to be admitted to the hospitals after several months of illness, and when, owing to the supervention of destructive lesions in the lung, or its permanent contraction and carnification, it is too late to think of a cure. One case will serve as an illustration:

The patient, a man, aged fifty-three, a store-keeper by occupation, had been ill for some three months prior to his admission to the hospital. He had suffered at first from a slight cough and shortness of breath. The distress had gradually increased, the cough had slowly grown worse and worse, with the addition of a copious muco-purulent expectoration and loss of appetite and flesh. At the time of his admission the temperature was somewhat elevated, the tongue inflamed and coated, and this, with colliquative sweats, of nightly occurrence, was rapidly wasting his strength. The physical exploration of the chest disclosed the presence of a collection of fluid in the right pleural cavity, while the upper and anterior portions of the lung were dull on percussion, and gave the auscultatory signs of partial consolidation and caseation. An attempt to withdraw the fluid by aspiration was only partially successful. After the abstraction of less than a pint the flow began to cease, and severe pain was felt in the intercostal spaces above and in the epigastric region. Several subsequent attempts were still less satisfactory, for we were only able to withdraw two or three ounces, though the needle and tube were clear, the vacuum good, and the needle could be freely moved in every direction, showing that it was in a cavity. When the suction was strong, the intercostal spaces could be seen to sink in, and the pain was considerable. The lung had become firmly adherent and partially carnified, and could not re-expand, while the thoracic wall could not sink in, because the costal cartilages had lost their pliability in consequence of senile calcification. Had not the phthisical process already commenced in the upper lobe, I should have resected some of the ribs, so as to allow the chest wall to collapse; but, under the circumstances, it was not thought advisable to operate. The patient died of phthisis and exhaustion a few months later. Had the diagnosis been made earlier in the course of the disease and the chest aspirated, I do not think that the case would have terminated so disastrously.

Another source of error in the diagnosis of pleurisy with effusion is the occurrence of bronchial breathing and bronchophony over the site of the effused fluid. If the lung is very greatly compressed and the thoracic walls tense, this deceptive sign is pretty sure to be present.

I am glad to see that the opinion which I have long held theoretically in regard to its causation—viz., that the sound is conducted from the bodies of the vertebræ outward along the ribs—is confirmed by the able researches of Dr. Garland, of Boston. The mistake of considering it an evidence of pneumonia may usually be avoided by careful attention to the sounds, which give the impression of being at a distance from the surface, and particularly by the percussion sound, which is flat over a pleuritic effusion, and only dull over a pneumonic lung. If any doubt is present in the mind of the diagnostician, it may easily be removed by the employment of the aspirator.

It may be well here to give a word of caution in regard to the use of the hypodermic needle for the exploration of the pleural cavity. It is, that the operator should carefully consider whether his hypodermic needle is long enough to reach the fluid in case there is any. I have several times seen failure with the hypodermic needle followed by success with the longer needle of the aspirator. Even if the needle is long enough to penetrate the thoracic wall, which it may not be in an obese person, there may be a layer of coagulated lymph upon the surface of the costal pleura which will catch and occlude its point. Again, the lung may be adherent at some points, and the needle, instead of getting into the fluid, strikes the adhesion. It is, therefore, well always to puncture in more than one place.

The *treatment* of acute pleurisy with serous effusion, in its first stage, should be directed toward subduing pain, limiting the extent of the inflammation, and preparing the patient for the constitutional strain to which he is to be subjected. To relieve the pain, opiates should be resorted to, enough being given to accomplish the object. When the pain is severe and lancinating, a hypodermic injection of morphine should be given. If it is not so severe, it may be administered by the mouth, or even milder forms may be used. Professor Bartholow's recommendation to give a full dose of morphine and quinine together is a good one. The quinine, by its antipyretic effect, and through its action upon the vaso-motor system, tends to lessen the violence and shorten the duration of the attack. In cases in which morphine and opium do not agree well with the patient, and where we want to combine an anodyne and an antipyretic, I have several times employed a powder containing from a quarter of a grain to a grain of codeine and from ten to twenty grains of antipyrine, giving it every two or three hours, according to the exigencies of the case. For children and delicate adults it is a very efficient combination. Another means of controlling the pain, and one which should never be neglected when that symptom is very distressing, is to limit the motions of the ribs on the affected side by means of strong adhesive plaster. Its use gives great comfort to the patient, and lessens the need for opiates.

To control the inflammatory process various means may be employed. In addition to the sedative and anti-pyretic drugs already mentioned, are those agents which lessen the arterial excitement and produce diaphoresis. The principal of these is *Veratrum viride*, which should be given in doses sufficiently large to produce a marked diminution of the frequency of the pulse—say three or four minims of the fluid extract every two or three hours. The tincture of aconite is also serviceable, though I think it inferior to the green hellebore. Less powerful agents are the spirits of nitrous ether and the spiritus Mindereri. These can be used in combination with the more powerful agents, and, by their diaphoretic and diuretic effects, will act as valuable synergistic agents. Their efficacy may be increased by the use of the hot bath and the administration of hot drinks. Local vesication may be employed, and in some cases it has seemed to me to aid in aborting an attack. It will, however, interfere with strapping the chest, and where the pain is very severe I should prefer the strapping to the blister. The constitutional treatment of the patient, in addition to that already mentioned, should consist in a careful regulation of the diet, which should be temporarily reduced to a minimum and of as simple a character as possible; complete rest in bed in a warm room and, should the condition of the alimentary canal require it, the exhibition of a mercurial or saline purge. By the proper employment of these means, when the case is taken sufficiently early, its severity may be greatly lessened and, in occasional instances, the disease may even be aborted. The friction sound will gradually disappear, and recovery ensue without any effusion having taken place.

In very severe cases, when the accumulation of fluid is great, there is danger of death from asphyxia. This results from the collapse of the lung on the affected side and from the consequent mechanical obstruction to the pulmonary circulation. The blood from the right side of the heart must be forced through its channel, which is diminished to almost one half its natural caliber—that is, the circulation of the affected lung being almost entirely cut off by its collapse and compression, all the blood which is delivered into the main trunk of the pulmonary artery at each contraction of the right ventricle must pass through only one of its branches—namely, that which is distributed to the unaffected lung. This lung in consequence is very hyperæmic, its vessels are filled to nearly twice their normal degree of distension, and this distension affects mainly the capillaries of the lung. Inasmuch as under normal circumstances the arteries and pulmonary veins are quite full, the excess of blood must be disposed of in one of two ways—either by an increased rapidity in its passage through the vessels of the lung, or by the accumulation of the surplus in the capillaries, which, as I have stated in my first lecture, are capable of holding from three to four times the amount of blood which they normally contain. In consequence of the distension of the capillaries in the alveolar walls, their capacity for air is considerably diminished and the blood insufficiently aërated. Besides this, the overfilling of the capillaries is always likely to be followed by some œdema, which adds still more to the embarrassment of the respiration. Under the increased pressure in the pulmonary artery, the cavities of the right heart become dilated, and this dilatation, if it exceeds a certain limit, will lead to paralysis of its muscular walls and stoppage of the heart in diastole. The signs by which this state of affairs may be recognized are: Increased rapidity and labor in breathing; a cyanotic appearance of the mucous and even of the cutaneous surfaces; the presence of fine, moist râles in the lung on the unaffected side, beginning in its lower and posterior portion and gradually extending; a small and rapid pulse, denoting an incomplete filling of the general arterial system; marked epigastric pulsation, and an accentuation of the second sound of the heart over the pulmonary artery. The last of these signs—namely, the accentuation of the pulmonary second sound—is due to the increased pressure in the pulmonary artery. If relief is not obtained, the cyanosis increases, the epigastric pulsation becomes more marked, the jugular veins are seen to be distended with venous blood, and loud mucous râles in the trachea and larger bronchial tubes indicate the impending dissolution. If a patient is seen before this state of affairs has taken place, I think I am safe in saying, it may always be avoided. Where the accumulation of fluid becomes so great as to produce any appearance of cyanosis or of dangerous congestion of the unaffected lung, mechanical relief should at once be given by the use of the aspirator. At the same time it may be advisable to begin the use of the cardiac excitants—digitalis, carbonate of ammonium, nux vomica, and alcohol; these means, if employed in time and before the œdema becomes too excessive, will probably always be successful. But, should the cyanosis and œdema have existed for many hours, the loss of vascular tone may be so complete that recuperation is impossible, and, though the fluid be removed by aspiration, the lung will remain œdematous and death ensue. I have seen but one person die from the immediate effects of unilateral pleurisy with serous effusion, and in that case aspiration was not resorted to.

If the inflammation involves both pleural membranes and is very acute, the prognosis is decidedly gloomy. If prompt and efficient means are not employed at the outset, so as to reduce the intensity of the inflammatory process and keep the exudation within bounds, death from asphyxia is very probable. An additional danger in these cases is their tendency to be accompanied by an acute pericarditis. This combination of serous inflammations is probably always fatal. The diagnosis of pericarditis, when it is associated with a double pleurisy, is sometimes exceedingly difficult. If it is not made during the first stage of the pericardial inflammation, when the friction sound is audible, it becomes impossible to do more than suspect its presence, on the ground that double pleurisy is almost always accompanied by pericarditis; by the condition of the pulse, which will be very small and frequent; and by the cardiac sounds, which are feeble and indistinct. When effusion has occurred and the friction sounds have disappeared, the dullness upon percussion resulting from it becomes merged in that which results from the fluid in the pleural cavity, and the case, as far as visible signs are concerned, is very obscure.

Original Communications.

THE SURGICAL TREATMENT OF SUBINVOLUTION.*

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Subinvolution of the uterus is a condition not particularly noticed by writers upon gynæcology, except as a factor in causing and keeping up a form of disease which, from the time of the earliest writing until the present, has passed under the various titles of chronic metritis, diffuse proliferation of connective tissue, diffuse interstitial metritis, chronic uterine infarct, chronic areolar hyperplasia, etc. My attention was long ago called, by that which has been handed down to us, to the plentiful endowment of names with which this condition of uterine enlargement was supplied, and also to its treatment, followed by less meager results; and this is the excuse I offer for adding to the subject the results of the surgical treatment of a number of cases which have come under my care during the past year. I have termed them subinvolution of the uterus, for the history given and symptoms manifested in these cases seemed to point more directly to that condition than to any of the chronic conditions previously mentioned. In looking over the literature of the subject, one can not help being surprised at the paucity of histological investigations of the condition of the uterus in a state of subinvolution. Writers in general seem content to pass it by with a hasty glance, and express themselves in such an uncertain manner as to give rise to much difference of opinion as to just what the progress of subinvolution may be.

Professor Retzius, of Sweden, has been given the credit of being the first author who, a little more than twenty years ago, called attention to this morbid condition. But no better clinical history can be desired than that given by Dr. Henry Bennett, as early as 1853, the only difficulty with it being the shadow of chronic metritis by which it is obscured. It would be folly for me to attempt to deny the existence of chronic metritis, for the same conditions that exist in other portions of the body may exist in the uterus. But that the pathological condition termed chronic metritis has been overestimated, and allowed to overshadow pathological conditions not inflammatory, is quite evident to me. Before impregnation, the uterus will not hold more than two fluidrachms. During the forty weeks of utero-gestation the organ enlarges from three to twelve or fifteen inches in length, and from two to nine or ten in breadth; and its contents at nine months' term may vary in weight from one hundred and twenty to one hundred and fifty ounces. This is a physiological process in which there is, in the time specified, an enormous increase of the normal muscular and fibrous elements of the organ. When the fœtus is expelled, nature at once attempts to return the womb to its normal size. At this time it contains what has been up to the date of parturition a physiological increase of tissue, principally muscular fibers. Should the patient receive some injury at the time of parturition, either by the use of forceps, by laceration of the cervix, by uncleanliness, or by too early rising from childbed, she remains in consequence an invalid for months, with pain, tenderness, and dragging weight in the pelvis, and the process of involution is then arrested. The uterus *still* retains what was a normal physiological increase of its substance before the birth of the child, but has itself now become abnormal from being the repository of more blood than physiologically belongs to it. Hence has arisen the term chronic congestion, which Dr. Emmet so clearly demonstrates in his last edition. Fritsch, although clinging to the term chronic metritis, and practically accepting the views of Scanzoni, says that "even in the normal puerperal condition, after severe detachment of the placenta, or considerable secondary hæmorrhage, there appears to occur quite a definite type of blood arrestments, post-partum, in which the latter (blood arrestment) does not take place by contraction. Consequently intimate apposition of the blood-vessels can not take place by contraction, but by a process of thrombosis far within the uterine parenchyma. In such cases the uterus remains strikingly large or under goes bad involution." Dr. Thomas condemns the term chronic metritis, and designates such uterine enlargement as areolar hyperplasia.

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* Read before the Alumni Association of the Woman's Hospital, at its second meeting.

While he declares the condition to be non-inflammatory-he says the most prolific cause of areolar hyperplasia is interference with involution of the parturient uterus, and that in time subinvolution will lead to the condition called chronic metritis. No doubt there is areolar as well as muscular hyperplasia, but such hyperplasia is ante-parturient, and, by arrest of the proper retrograde metamorphosis, it remains a repository for abnormally large blood-vessels, and a constant stimulant to active congestion.

Ziegler says:

> "When the enlargements of the uterus are connected with or follow the puerperium, they are, in a large proportion of the cases, followed by an increase of the muscular mass, and that inflammatory changes can not be demonstrated at a later period. We have, consequently, to deal with a muscular hypertrophy, the result of defective retrograde metamorphosis."

While the majority of writers give much attention to chronic metritis, and but little to subinvolution, it is a noticeable fact that, were it not for the latter condition, chronic metritis would be a rare disease; for all writers agree that chronic metritis is seldom seen in the unimpregnated uterus, Dr. Emmet even going so far as to assert that chronic metritis is a misnomer, and says (page 30, last edition):

> "Inflammation always involves an infiltration of cellular elements into the parts, or a multiplication of those already there, and this product may be recognized by an almost superficial inspection if it has not been absorbed; but we look in vain after death for any evidence of metritis, endometritis, or ulceration of the cervix as it is termed, for neither of the conditions so called is inflammatory."

In support of the first part of this theory, I quote from a personal letter from Professor Welch, of Johns Hopkins University, in which he says:

> "I have examined a number of cases of subinvolution of the uterus microscopically, and in these I found the normal histological elements of the uterus in their normal relative proportion, so far as could be ascertained. I found no evidence of parenchymatous or interstitial inflammation, and therefore no propriety in regarding this condition as inflammatory, or as other than a disturbance of nutrition. Cohnheim practically draws the same conclusions. He says (page 688, 'Allgemeine Pathologie') the uterus, after expressing the fœtus, undergoes a physiological atrophy, which, so far as muscular and intermuscular cellular tissue comes into consideration, is effected mainly through an exceedingly copious excretion of matter into the lymph and blood, and is carried away by the latter. It frequently happens now that the involution is interrupted before the uterus has regained its normal size of infecundation. The results of this arrest are, at times a uterus very considerably enlarged in all its dimensions, whose main mass consists of hypertrophic and abnormally numerous muscular fibers, abundant intermuscular connective tissue, and vessels with remarkably thick walls. In short, the condition only too well known to gynæcologists, which is usually diagnosed as chronic metritis."

That chronic inflammatory processes on the part of the uterine mucous membrane may at the same time concur, I do not deny. But the essential feature, which dominates the entire process, the enlargement, depends upon nothing else than a loss of substance pathologically less than the standard. That is to say, the morbid condition is a genuine progressive disturbance of nutrition, on the basis of diminished consumption. Klob, Carl Braun, and Wedl assume the same position, conceding the enlargement to be due to disturbance of nutrition, and speak adversely of the use of the term chronic metritis.

But enough. The scope of this paper will not admit of a lengthy statement of the views of various writers concerning the pathological changes consequent upon arrest of involution of the uterus. I therefore content myself by giving the views of some of the most noted authors concerning these changes, together with the results of my own personal experience in a number of such cases. It matters not which of the terms we apply to this most troublesome disease. It is a conceded fact that subinvolution stands out in bold relief as the primary and principal cause of it. Hence the treatment has been the use of all agencies which tend to produce absorption of areolar tissue, contract muscular fibers and blood-vessels, and relieve congestion. It would be useless to attempt to enumerate all the remedies recommended for this purpose. Medicine, like all things else, soon finds its own level. And so it is in these cases. Clinical experience speedily demonstrates the worthlessness of drugs alone, when applied to subinvolution (especially when the latter is of long standing), except to assist in building up the general health. For the latter, change of air, sea-baths, tonics, massage, and electricity have been prescribed. But this disease does not confine itself exclusively to the rich, who can have all these things for the asking. It visits the homes of the poor, who are put to bed by midwives, and who seldom stay there long enough for the retrograde process to become well established. They also remain in ignorance of any injury, such as laceration of the cervix (should it happen to them), and only become aware of it when inability to perform their daily work obliges them to resort to some public dispensary or hospital.

Chief among the local remedies has been the use of Churchill's tincture of iodine, iodized phenol, solution of nitrate of silver, and carbolic acid, either pure or diluted, applied to the endometrium and vaginal roof, together with hot vaginal injections, and depletion of the uterine neck by leeches and frequent tapping. All this it has been my privilege to see carried out until the uterine neck became so soft as to readily tear when caught with a tenaculum, and still the symptoms were not relieved. These various methods of treatment were faithfully carried out in my cases before surgical treatment was resorted to. In all of them it relieved tenderness, and in some it was of service in reducing the size of the uterus, while in others it was not. I have noticed that in those cases which were attended by a fungous condition of the endometrium, or were of such long standing that the cervix had become hardened, the uterus did not diminish in size from the use of the hot water and iodine treatment, and in none were the symptoms entirely relieved.

Several operative procedures have been resorted to to reduce a subinvoluted uterus. Martin and Schroeder did amputation of the cervix, while Sims, as early as 1857, made use of the galvano-cautery for the same purpose; but it remained for Dr. Emmet to give to the profession his operation for trachelorrhaphy before it was practically demonstrated that the uterus could be returned to its normal condition without resort to the disfiguring operation of amputation of the cervix. Yet to-day Dr. Emmet's operation occasionally meets with adverse criticism, especially in Europe. I can not but affirm my belief, however, that such adverse criticism arises from a lack of knowledge of the first principle for which the operation is done. For years he has strongly emphasized the importance of going well into the angles of the laceration in doing the operation, in order to remove all dense tissue, asserting that otherwise the operation will fail to cure the symptoms, and that, instead of the uterus decreasing afterward, it will become more congested and the woman be made worse.

Dr. Emmet says he does not do the operation so frequently as in former years, especially when the laceration has healed and there are no reflex symptoms attending the condition. But if the latter are present the operation is not only justifiable but demanded. In this paper I shall show that the operation is not only justifiable when there has been a laceration, even though it is healed, but also when there is no evidence of laceration whatever. If a patient presents herself with symptoms clearly showing an arrest of involution of the parturient uterus, the operation of trachelorrhaphy, when *properly* performed, can not *help* resulting beneficially to the patient.

For this purpose I have chosen twelve cases whose histories seem to point clearly to subinvolution, together with one case which, although it can not come under the head of subinvolution, I have added to show more clearly the direct beneficial result of the treatment resorted to. I took the cases at random as they happened to appear, and carefully noted the condition of the patients at their first visit, and in each instance accurately measured the depth of the uterus. One of the notable features in these cases is the similarity of symptoms voluntarily given by the patients, namely, pelvic weight and dragging, suprapubic pain, backache and headache, profuse leucorrhœa, constipation, and dysuria, accompanied by the remark from each that she did not get up well from a confinement, or had never been well since having a miscarriage. All but two of them had received local treatment before coming under my care.

Physical examination gave no evidence of a circumscribed inflammation or active cellulitis in the broad ligaments or walls of the vaginal roof; but as I approached the uterus the tenderness gradually increased until, placing my finger under the cervix and making gentle pressure upward, the patients would immediately complain of pain. Examination by speculum disclosed the various degrees of severity to which the disease had advanced. Laceration of the cervix was present in seven of the cases, while in six there was no evidence of this condition, so far as scarring of the cervix was concerned; but the latter was large, hard, and unyielding. Painful menstruation was usual in ten of the cases, referable in six to the left side, while menorrhagia was present in eight. Leucorrhœa, with but one exception, was a constant attendant. In eight, obstinate constipation was the habit, with painful micturition as an accompaniment. These patients were at once put upon the use of hot vaginal injections twice daily. If there was cystic degeneration of the cervix, all of the cysts that could be reached were tapped. If the os and cervical endometrium were granular, appropriate treatment for it was given; and applications of Churchill's tincture of iodine to the cervix and vaginal roof, together with glycerin tampons, were used in some cases as often as every other day. That this method of treatment was beneficial no one for a moment could doubt, but it did not cure my patients. It did not relieve the weight and dragging pains, or do away with the foul leucorrhœal discharges of which the patients had so long complained.

After each patient had been kept under this form of treatment for a certain time (which will appear in the table annexed), she was put under an anæsthetic, and the depth of the womb carefully noted. If menorrhagia had been her habit, the cervix was rapidly dilated, and the endometrium carefully but thoroughly curetted with Bozeman's curette, and then thoroughly touched with a 1-to 2,000 solution of bichloride of mercury, wiped dry, and again touched with glycerite of carbolic acid. Many prefer the use of Churchill's tincture of iodine for this purpose, believing it more efficacious in preventing a return of the fungosities; but, in cases where the cervix is to be operated upon, the use of the iodine is disadvantageous on account of its discoloring the parts and rendering the operation more difficult. After this treatment of the endometrium, if the cervix was lacerated, I operated for its closure after Emmet's method, going deep into the angles of the laceration. If the cervix was not lacerated, I operated after the following manner: I steadied the cervix with a heavy, curved tenaculum, and, with a pair of sharp, narrow-bladed scissors, I made a deep, narrow V-shaped incision in each side of the cervix, extending the incision, if possible, deep enough into the uterine tissue to sever what we ordinarily style the circular artery. Then, after letting the incisions bleed quite thoroughly, I closed the wound by passing sutures from without inward across the incision, taking care that the first sutures ligated the several vessels. After the operation, warm-water vaginal injections were used for cleanliness only. If the uterus was retroverted, a pessary was fitted and allowed to remain in position while the wound was healing.

This method of operative treatment is not new, for, in 1884, my preceptor, Dr. Gordon, of Maine, read a paper before the International Congress at Copenhagen (see "American Journal of Obstetrics"), entitled, "The Operative Treatment of Hyperplasia of the Uterus and Vagina, with Special Reference to the Cure of Displacements," in which he advocated the removal of the V-shaped portion from the cervix to produce involution, upon the same principle that we ablate a portion of the tonsil to produce fatty degeneration and absorption, and he gives valuable evidence of the beneficial results of such an operation. It is my own belief that a large proportion of the displacements in parous women are due to lack of proper balance between the cervical and corporeal portions of the uterus, caused by arrest of the proper retrograde metamorphosis; for, in three of the cases here reported, I have seen the uterus return after operation from the second degree of retroversion to its normal position without the aid of artificial support. In not one of the cases did an unpleasant symptom follow the use of the curette in conjunction with operating upon the cervix.

The following table shows the results obtained upon the patients, with whom, with one exception, I have communicated either personally or by letter during the past ten days, and from all I receive the answer that they are well.

Case No. 13 in the table represents the results obtained upon a uterus *never* impregnated, but hypertrophied by the development of three subperitoneal fibroid growths, varying in size from an egg to a large orange. I operated as described, first thoroughly curetting the uterus. Not only did the latter decrease in size, as shown, but there was also an appreciable diminution in the size of the fibroids, with almost entire relief from the menorrhagia and dysmenorrhœa.

CASES.	Age.	Years married.	Number of children.	Number of abortions.	Depth of uterus when first seen.	Duration of treatment.	Depth of uterus after treatment.	Time elapsed after operation.	Depth of uterus at last-named date.
					Ins.	Days.	Ins.	Days.	Ins.
1......	35	10	2	0	4	28	4	38	2¾
2......	30	10	1	0	4¾	25	4½	178	2¾
3......	40	19	1	1	4	36	4	29	2¾
4......	43	23	7	8	3¾	29	3¾	36	2½
5......	28	9	2	0	4	4 yrs.	4	41	2¾
6......	34	15	2	0	4	26 days	4	35	3
7......	29	5	1	7	4	7	4	12	3
8......	37	16	2	0	3¾	90	3½	2 m.	2½
9......	45	20	5	2	5	46	5	26 days	3⅓
10......	30	15	4	1	3¾	64	3¾	34	2½
11......	37	12	6	0	6	2 yrs.	6	58	4
12......	29	8	2	1	3¾	1 yr.	3½	43	2½
13......	39	16	0	0	4	90 days	3¾	54	2⅝

THE IMPORTANCE OF THE

EARLY RECOGNITION AND REMOVAL OF PLEURITIC EFFUSIONS.

*THE DANGERS OF DELAY AND ROUTINE METHODS.**

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We have an inflamed pleura upon the opposed surfaces of the lung and the chest-wall, coated with an inflammatory exudation, rich in connective-tissue cells and plastic material; soon capillary blood-vessels form within it; the fluid has gravitated to the dependent portions of the sac, displacing the heart and the lung according to its amount. So long as the lung contains air and is unconfined by previous adhesions, it floats upon the surface. Unless early absorption occurs, the exudation coatings become thicker and firmer; bridles or bands form, extending from the pulmonic (contracted) surface to the costal pleura, the important result being that expansion of the lung is rendered difficult or impossible; or, when this occurs subsequently after operation, we may have renewed effusion or hæmorrhage from the newly formed vessels, unless the evacuation is slowly and not too completely conducted.

Medicinal treatment for the removal of the effusion is too uncertain to rely upon. What shall we do? Aspirate! When? I shall give you a few of the most trusted opinions upon this important point.

Loomis † says: If fluid remains stationary one week, or is increasing when the cavity is half filled, we must operate. Barnes would only wait a few days, if the chest was half full, to see if absorption would begin to remove it. When two thirds full, he advises immediate surgical interference. Anstie waits a month. T. Clifford Allbutt's general rule is, when the effusion rises above the angle of the scapula and abides in that quantity for two or three weeks, or increases in spite of adequate treatment, it must be drawn off. Bowditch delays operating from two to four weeks unless there are urgent symptoms of dyspnœa. Donaldson, after drawing attention to the value of the cyrtometer for showing the amount of absorption, concludes (1) that aspiration is imperatively called for when the pleural cavity is full or nearly so; when there is much displacement of the heart or other viscera; when the patient is suffering from serious dyspnœa and there is danger of syncope, and when there are complications of disease of any kind of the other side or of the heart; finally, where there is double pleurisy.

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* Read before the Georgia State Medical Association, April 22, 1886.

† Pepper's "System of Med." Pleurisy, by Frank Donaldson, M. D., to whom I am indebted for these quotations and many facts related.

(2) He thinks that in acute cases after the subsidence of the fever, if the pleura is one third full of fibrino-serous fluid, Nature will probably do her work of removal promptly. If she shows no signs of doing so, we should come to her assistance in about ten days or two weeks, and draw off a portion—enough to relieve pressure and to encourage absorption.

(3) In subacute or chronic effusions it is not well to wait over three weeks before operating.

The views quoted are those of eminent authorities, and represent those generally held and followed by the great majority of progressive physicians; many, unfortunately, wait a much longer time, using counter-irritation, etc.

Now, I maintain that these delays are dangerous and unnecessary. I would call your attention to some of the important risks. Fraentzel tells us:* "In almost every case the effusion is at first fibrino-serous, but may become purulent as early as the first week." Clinical experience teaches that in children especially, or by a second inflammation occurring in the already inflamed pleura, the change to pus is often rapid; this alone renders the prognosis much graver and complicates the treatment very much indeed. What I would strongly emphasize is the early organization of the exudation coating the compressed lung and costal pleura; the former is in danger of being permanently prevented from expanding by this casing becoming thicker and firmer, and by the bands which form between the opposed surfaces in their altered relations. Delafield † states that we "have this new connective-tissue growth with blood-vessels by the fourth or fifth day of the inflammation." How many effusions have been reproduced or rendered hæmorrhagic from the aspiratory negative force upon these vessels after too complete or hasty aspiration can not be told. But it may be maintained that, clinically, we find that the lung does often expand after the fluid has remained some time. True; but with our present means we can not predict that in any given case it will. The very cases in which delay is most practiced are the most dangerous—those with marked constitutional disturbance of a sthenic type, the exudation coating and fluid being denser, the one more capable of rapid organization, the other of slow and incomplete absorption. When the effusion is large, the pressure effects upon the absorbents, the cachectic condition under which the patient often labors, the effusion, rich in fibrin, becoming denser if absorption occurs, render the efforts of Nature slow and incomplete. Early aspiration brightens the prospect of lung-expansion, removes a treacherous inflammatory fluid, lessens the duration of the illness considerably, and, if properly done, is perfectly harmless. What do we know about it clinically? Castiaux * in thirty odd cases operated at the height of the inflammatory stage of the disease. He aspirated as soon as he detected the presence of fluid by exploratory punctures; he removed the fluid as completely as possible. The vesicular murmur showed that the lung had resumed its place from top to bottom. The effusion returned in only a few cases, and in these another removal was successful; he never had the effusion transformed into pus upon reaccumulation. In most of his cases the pulse and temperature fell within thirty-six hours after operating. His reasons for aspirating so early are, in part, that he thereby relieves the lung of compression which impairs expansion; that he removes a liquid rich in fibrin and capable of increasing the thickness of the neo-membranes; that these membranes can not become organized unless they are separated by fluid. The pleurisy is thus cut short and puncture (aspiration ?) is considered the means of aborting the disease. Moutard-Martin † operated in twelve cases during the fever before the tenth day. In eight of these cases there was no reproduction of fluid; in four a slight reformation occurred. Wedal,‡ in fourteen cases, operated between the second and fifth day during the fever. In the cases free from bronchial or pulmonary complications, some were cured by the sixth day; none were protracted beyond the twelfth. Most of his patients were vigorous young soldiers.

Now, in conclusion, what is the natural duration of acute primary pleurisy?# The average duration, when the effusion has not reached any considerable height, is from two to four weeks—maximum 38 days, minimum 20 days. Woillez,‖ in a large number of observations, found that absorption began between the eleventh and twenty-fifth day, and lasted over fifteen days. In these uncomplicated primary cases, when shall we aspirate? Should the abortive action of aspiration upon the disease, as maintained by Castiaux, be confirmed, *aspirate as soon as physical examination can diagnosticate the effusion.* Theoretical considerations are not sufficient to refute so important a claim; we want practical tests. The duration of the fever is too indefinite and is dependent upon too many complicating factors to be a guide for its removal; the evidence shows that aspiration can be done with impunity during its continuance. We also know the marked beneficial effect of early aspiration upon acute arthritic effusions; it is true, we have here the important element of tension, but there can be no doubt that the early removal of the inflammatory fluid directly promotes the favorable termination.

But in every-day practice the great majority of cases are of the subacute or chronic variety; the effusions have already been present for some time. What should be the rule as to time for operation? Waiting for the absence of the fever is still more pernicious in these. We can not know, prior to aspiration, whether the new material around the lung and the other conditions present are capable of preventing expansion or not. It is our bounden duty to give the patient the benefit of the doubt. It is unsurgical to delay. Therefore, *when the cavity is not over half full, and the history as to the duration of the effusion is uncertain, wait two days;* if absorption does not then begin and continue *uninterruptedly*, aspirate.* *In all cases* where the effusion fills three fifths of the cavity, aspirate without delay.

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* Von Ziemssen's "Encyc.," vol. iv, Pleuritis.

† Delafield's "Lectures upon Practice," No. 23, f. 133.

* Donaldson, *loc. cit.* † *Ibid.* ‡ *Ibid.* # *Ibid.* ‖ *Ibid.*

It is not my purpose, and it would make this paper too long, to recount the details of thoracentesis; they are carefully mentioned in modern works, but the following practical points are important: Always use the "close-bottle" aspirator (Potain *et al.*), and the smallest needle that is efficient, and, when available, one with the sharp point guarded, which prevents injury to the lung when it descends. This one (shown) has an inner probe-pointed cannula. After the puncture, it is farther advanced within the needle, so as to guard the sharp tip, and is secured by a bayonet-joint. The site of the puncture, the needle, the *stylet*, the tube, and the bottle should be made surgically clean with a five-per-cent. solution of pure carbolic acid. The advice of Bowditch † should always be strictly followed: "I always draw with great deliberation. I pull so lightly upon the handle of the piston that it seems as if the fluid itself were pressing out from the chest and pushed the piston upward, my hand simply following that impulse. The instant that the patient becomes restless, especially if he has any constriction or sharp pain in the chest, I withdraw the tube, even if a large quantity of fluid remains." I would advise that a many-tailed bandage, with a pad or other abdominal compress, be used for a few days after aspiration, so as to limit the descent of the diaphragm, thus avoiding in part a too early negative pressure (suction) upon the exudation vessels. The use of the every-day hypodermic syringe for the purpose of establishing a doubtful diagnosis, without antiseptic precautions and a tight piston, can not be too severely censured.

A HOME-MADE SPINAL APPARATUS.

By C. FAYETTE TAYLOR, M.D.

What may be called *the handy method of getting spinal instruments* came about during my recent visit to Meran, Austria, in this way: Olois Streber, a Tyrolean peasant, thirty-three years old, was run over by his own ox wagon in July of last year. He was taken up completely paralyzed in his lower extremities, and carried home, where he had ever since lain. An English lady, who spends all of her life doing good to the sick and distressed, asked me to see the poor man, which I did, in April last, in consultation with the attending physician, Dr. Mazegger. I found him in a pretty wretched condition, with sluggish ulcers in various parts of his lower extremities, and a large bed-sore over the sacrum. Turning him on his face, I found undoubted evidence of primary injury to the spinal column in the lumbar region, with probable progressive disintegration of several vertebral bodies as a secondary consequence of the injury. The outward displacement of the injured and diseased vertebræ was plainly to be seen. There had been recovery of considerable sensation in the lower extremities, and there was a slight amount of voluntary motion in the right leg, but not sufficient to be available in diminishing his utter helplessness. He had already been lying there nine months, and had a wife and two small children, the youngest only three months old; altogether it was a case to excite compassion and sympathy. I explained to the doctor that, both on account of the original injury and the subsequent and consequent changes in the bodies of the vertebræ, they ought to be protected, and suggested the plaster-of-Paris jacket as a simple means, in the absence of more efficient permanent apparatus. No apparatus can be procured in Meran. Nothing was done, however; and some days later I was asked to take the case and do what I could for it. My first intention was to make an apparatus of wood, which would be perfectly feasible for the spine or for any other orthopædic purpose when workers in steel can not be under command. But, after thinking about it over night, I adopted another and much better plan. My materials were several sheets of thick blotting-paper, such as can be procured at any stationery store; three yards of coarse linen-cloth; some shellac dissolved in alcohol got at the druggist's, and a pot of glue. My tools were a pair of shears, an awl, my pocket-knife, a brush, and a very definite purpose in my own mind of what I wanted to do. Taking two sheets of the paper held together, I cut them very nearly into the shape of the muslin portion or "back" of a man's waistcoat, long enough to extend from the first dorsal vertebra to below the trochanters, and wide enough to come well around the sides of the body. I then cut a longitudinal slit at the place corresponding to the projecting vertebræ, and slashed the paper on each side under the shoulders and above the ilia to within two inches of the center line, taking care that the cut in the upper one was above or below that in the lower one, so that each cut would be covered in modeling by the uncut portion of the other paper. Everything being ready, I saturated both papers thoroughly with the alcohol and shellac by rapidly applying it with a paint-bush. In a few minutes the paper was soft and pulpy, and was easily and quickly modeled to the form by gentle pressure with the fingers and hands. The edges at the top and shoulders had been cut at frequent intervals about half an inch deep, the cuts on one paper always coming between those on the other. The edges thus cut were then turned up, so as to form a rim for the purpose of giving increased strength to this portion of the apparatus, the only portion not capable of taking a curved form. Careful manipulation soon caused the paper to take the exact form of the patient's back; and, while I was still at work, the alcohol began to dry out and the paper to stiffen. Within half an hour the mold thus formed was lifted off and placed in the sun for more rapid evaporation of the alcohol, and in half an hour more was stiff enough to carry home without danger of alteration. Next morning it was dry and hard. On each side of this mold I pasted, with thick, hot glue, a layer of coarse linen-cloth, thin enough to stretch and fit without necessity for cutting. Over the cloth thus glued on other layers of blotting-paper were fitted, after having been first saturated with shellac and alcohol, then dried and glued down, and over each of these paper layers was a layer of cloth—thus alternating prepared paper, molded and glued down, and then cloth, to the number of four layers of paper and five of linen-cloth. It was then strong enough except at the point of greatest pressure at the middle of the back, which was strengthened by gluing down alternate layers of paper and cloth till the hollow in the posterior part of the back of the mold was nearly filled up. It would then bear the weight of a man without yielding in the least. Turning it over, the apparatus was completed by pasting with starch-paste a number of layers of paper on each side corresponding to the projection in the spine, enough to secure the pressure desired at that point. Applying the apparatus after this last step of fitting, I found it lifted away from all parts of the body, top, bottom, and sides, except at the points of contact on each side of the affected vertebræ. The requisite "support" was thus secured. This strong frame was then pierced near the edges by the awl in places corresponding to the location of the buckles in the steel "spinal assistant," and the buckles were tied on with narrow tape for strings. A linen "chest-piece" and an "apron" of thick muslin, exactly like that we ordinarily use, completed the apparatus, at an outlay of about two dollars and a half, and, perhaps, three hours' time, spread over two days. On applying the "brace," it was found that the opening was too narrow to receive the projecting spinous processes. This was speedily remedied by paring off a little with the knife, after which it was perfectly comfortable, and he wore it night and day with entire ease and satisfaction from the first application, and is doing exceedingly well now.

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* The spirometer of Dr. Jagielski, according to Morgan ("Lancet," Feb. 26, 1881, "Treatment of Pleurisy and Emphysema," by John E. Morgan), simple, trustworthy, and easily worked, or the cyrtometer, is very valuable in determining the early absorption; the level of liquid on percussion is sometimes misleading.

† Donaldson, *loc. cit.*

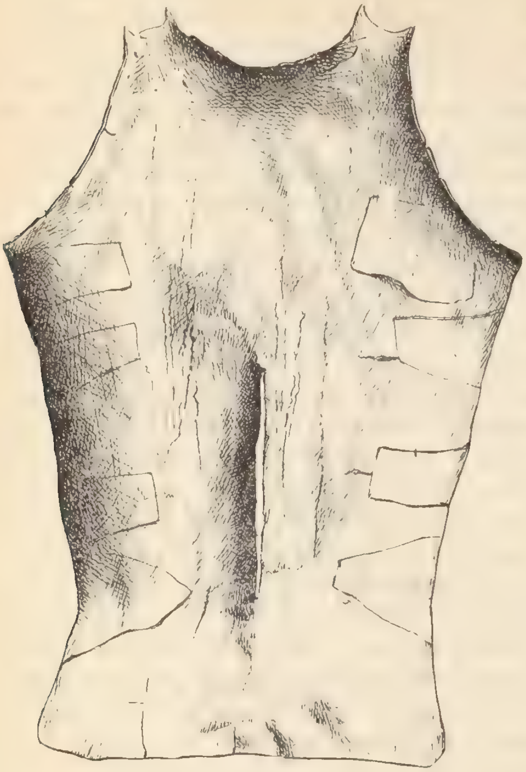

Fig. 1.

The only thing of special interest in this novel spinal apparatus is the simplicity of the materials from which it is constructed. They can all be procured anywhere. Old newspapers would do just as well for taking the form or mold, and I should have used them, except that blotting-paper is more cleanly to work, and, in this instance, was more easily obtained. Of course, the chief thing is to get a perfect mold of the back. This is then built up and reinforced by successive layers till it is strong enough. Then it is practically indestructible, and will last for years. As the finished instrument does not show the first mold, which is the really important part, I have made a second one—an hour's work—from a photograph of which Fig. 1 was made. It shows the posterior or convex side of the mold. The completed apparatus, as applied to the patient, Streber, is shown in Fig. 2.

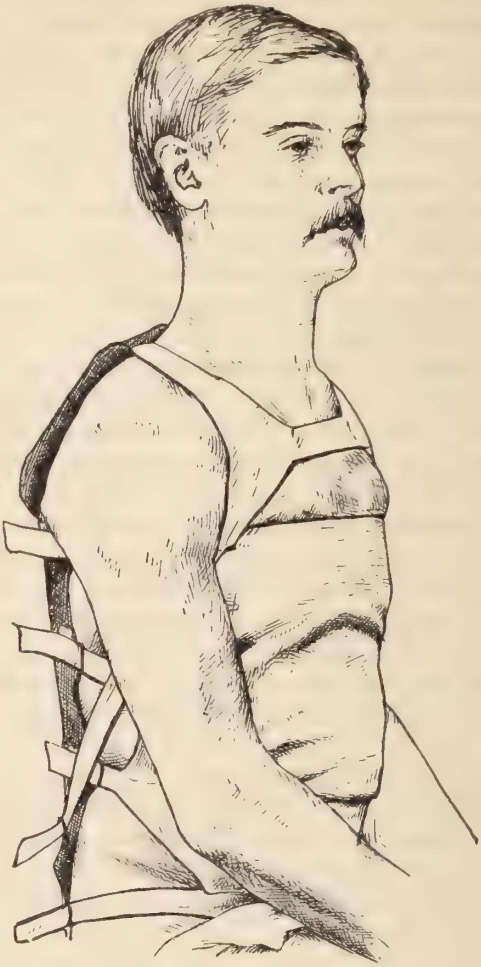

Fig. 2.

I do not see why the same materials and method of procedure may not be successfully employed in some cases for the upper or lower extremities. Indeed, before proceeding to make the spinal apparatus, I made this patient an apparatus to support the most paralyzed leg—anticipating the time for putting him on his feet—for the purpose of testing the manipulative qualities of the materials I proposed to use, especially to see if soft paper, wet in alcohol, could be molded to the form; and, if that could be done, to see if the shellac would be sufficient to hold it in form after the alcohol had evaporated. I found both suppositions held true. I had to strengthen the leg brace at the knee, which was readily done with strips of the same materials applied on each side. Thus it is seen that out of simple and readily procured materials, quite independently of distance, not to say incompetent or inattentive instrument-makers, one can have, not a mere bandage of transient existence, but a real practicable machine, capable of definite, prescribed mechanical force and action; capable of modification without injury, and which will be both inexpensive and indestructible.

I do not think the *paper orthopædic appliances* will take the place of steel ones when the latter can be procured, though I am quite sure we shall try them in some special cases. But, in comparison with gypsum for any orthopædic purpose whatever, I am confident that the combination of paper and cloth herein described is immensely superior. It is just as cheap, often more easily procured, does not crumble to pieces, is lighter, is at all times under inspection and control, has capacity for exerting mechanical force in prescribed quantity and direction, and does not have to be renewed.

Note.—The foregoing paper was embodied in a letter sent to me by Dr. C. Fayette Taylor from Meran, South Tyrol, and dated May 23, 1886. I was struck with the simplicity and effectiveness of the method, and at once constructed a "home-made" brace according to the directions.

After one failure, due to imperfect preparation, I had no trouble in constructing a perfectly solid and light appliance which seemed to meet the requirements of fit, adaptability, and strength.

The paper should be well saturated with the shellac before it is molded to the back. The shellac must be thin enough to completely wet through the paper; it is at any time easily thinned by adding more strong (95-per-cent.) alcohol. Linen strips doubled and sewed together make an admirable substitute for webbing.

Dr. Taylor suggests that experience may enable us to make the brace lighter and more airy by cutting fenestræ in the parts subjected to least strain, and perhaps by adding light steel strips each side of the spinal column between the layers.

Henry Ling Taylor, M. D.

201 West Fifty-fourth Street.

TWO CASES OF EAR DISEASE DUE TO TRAUMATISM.*

By GORHAM BACON, M. D.

Case I. *Injury to the Membrana Tympani from the Twig of a Tree.*—A. M. O., aged forty-eight, a resident of New Jersey and a farmer by occupation, came to see me April 21, 1885. He says that previous to this accident he never had any ear disease, and that he has no hereditary tendency to deafness; he has always been a healthy man; when he takes cold, however, it generally "goes to his head."

Two months ago, when walking through the woods in Florida, a twig from the end of a bough penetrated the right auditory canal. He immediately felt a sharp pain, and everything seemed blurred for a few seconds; there was considerable bleeding from the canal, which continued for some time; the pain, which was sharp, recurred at intervals for a day, and a roaring noise in the ear (like a piece of wood slashing around in a pail of water) commenced soon after the accident, which, though worse at times, has been present ever since. The ear discharged a thin, watery fluid a day or two after the injury, and continued for three weeks. He says he was not dizzy at all after the accident.

He did not consult any physician at the time, as there was none at hand, but put some laudanum into the ear. On returning to New Jersey, a physician there advised him to syringe the ear with tepid water, and drop in sweet oil, this being all the treatment he has received up to the present time.

Examination.—The right membrana tympani is congested around Shrapnell's membrane and along the handle of the malleus, also very much retracted, with the posterior fold of the membrane and the short process very prominent; the cone of light is foreshortened, and there are several opacities in the lower part of the membrane. The left membrana tympani is fairly normal, although slightly opaque and retracted, and there is some congestion about the short process; the cone of light extends almost to the periphery. The patient has some chronic naso-pharyngeal catarrh.

Hearing distance, acoumeter, right ear six inches, left ear nine feet; when a tuning-fork is placed on the vertex cranii, the sound is referred to the right ear; the aërial conduction is better for both ears than the bony—that is, a vibrating tuning-fork is heard louder when held in front of each ear at a distance of two inches than when placed on the mastoid process. By Politzer inflation, air passes into both middle ears, but the right Eustachian tube is more pervious than the left one; there is also, after inflation, some bulging of the posterior inferior quadrant of the right membrana tympani, and the hearing distance for the acoumeter is increased in the right ear to twelve inches, and in the left ear to twelve feet.

Case II. *Pistol-shot Wound of the Right Mastoid Process.*—Annie B., aged twenty-three, a native of the United States, consulted me February 10, 1885, at the New York Eye and Ear Infirmary. Before receiving this wound she never had any deafness or tinnitus. She is not subject to head colds, but is very anæmic in appearance. Last June, she says, a man, standing about six feet behind her, accidentally fired a pistol which he held in his hand, and the bullet struck her just behind the right ear. She was not unconscious at the time, but suffered excruciating pain. She was taken to the Chambers Street Hospital and immediately put under ether. She did not notice that she was deaf till after she came out of the anæsthesia, and, four days after this, she first noticed a singing noise, which has been present at times ever since. She is more deaf and has more tinnitus during damp weather, and about five o'clock every day she observes that she can not hear so well as in the morning. She also says that every night since she was shot she experiences a numb sensation in the ear. She remained in the hospital about two weeks.

About four months ago, when putting a hair-pin in the right auditory canal to relieve an itching sensation, she ran it against a hard object just inside of the meatus. She was prompted to seek advice at the Infirmary, because night before last she had a severe earache, and all day yesterday some bloody matter came from the right ear; the deafness and noises have remained about the same as at first; she feels that same numb feeling in in the ear which has been there since the accident.

Examination.—The left membrana tympani is dull, very much retracted, and thickened.

The right membrana tympani not seen, as the canal contains a loose sequestrum of bone, and there is a bulging of the posterior wall; the protuberance or bulging commences just inside the meatus; the anterior wall of the canal is inflamed. There is a cicatrix over the mastoid process about one inch long, half an inch behind the auricle, the depression where the bullet entered being on a level with the upper wall of the auditory canal and about three quarters of an inch behind the attachment of the pinna. Hearing distance, acoumeter, right ear, 0; left ear, almost normal.

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* Read by title at the Annual Meeting of the American Otological Society, July 20, 1886.

A tuning-fork on the vertex is not heard with either ear, but when placed against the teeth is a little louder in the right ear. The bony conduction is better than the aërial in the right ear, and *vice versa* for the left ear.

Operation.—Ether given by the resident surgeon, Dr. Walker. The sequestrum of bone lying in the canal was removed. The swelling on the posterior wall of the canal, round and hard, had every appearance of being the bullet beneath the lining membrane of the canal. An incision was made through the tissues covering this protuberance, but it proved to be necrosed bone; several pieces of bone were removed from the posterior wall, so that an opening was made through to the mastoid cells; some lead came away also. The hæmorrhage being profuse and the opening so small, it was considered advisable to trephine the mastoid. Some more pieces of bone were removed through this opening behind the auricle. The bullet was firmly imbedded in the mastoid cells, lying against the inner wall of the mastoid cavity, close to the antrum; it was very much flattened out and firmly adherent. The patient's pulse suddenly becoming very weak, any further procedure was stopped, as she had been under ether for some time. The mastoid cavity and parts were washed thoroughly with a solution of bichloride of mercury (1–1,000), and iodoform insufflated and a plug of lint inserted in the opening made by the trephine.

February 12th.—The patient has had no bad symptoms since the operation. Hearing distance, acoumeter, right ear, 3″.

13th.—No pain in the ear; it hurts her to open her mouth in eating; no headache nor any bad symptoms; the canal is somewhat inflamed near the external meatus. The cotton was partly removed from the wound over the mastoid and the sinus through the posterior bony auditory canal, and the parts were syringed as before with the bichloride solution and dressed with iodoform. The hearing distance improved to 6″ for the acoumeter, and she hears the cars passing the door now, which she could not do before the operation. The bullet is seen through the mastoid opening, close to the antrum and firmly adherent. Any attempt to remove it causes great pain and can not be done without again giving the patient ether, which she refuses to have done.

The patient refused to remain any longer in the hospital, but promised to return, however, and have the bullet removed in a few days. She came back, but said her friends would not allow any further operation.

16th.—Temperature, 99·5° F. at 5 P. M.; same dressing as before; any attempt to remove the bullet ineffectual, as it caused too much pain; some lead was cut and scraped from the remains of the bullet several times, and the patient was treated as an out-door patient. No membrana tympani can be discovered in the right canal.

17th.—The patient had considerable pain from 7 P. M. till midnight; also fever and sweating. Hearing distance, acoumeter, 21″; she hears very much better.

March 6th.—During the past two weeks the patient has been attending at the Infirmary twice a week, and the same treatment has been followed out. The wound has been closing very rapidly, so that it was impossible to remove any more lead. There is bulging of the posterior and upper part of the inner end of the bony auditory canal, and the passage does not look very well between the mastoid cells and auditory canal. The patient has had headache, also chills at night since day before yesterday, followed by fever. Acoumeter, right ear, 0″.

10th.—Hearing distance, acoumeter, 30″. The tuning-fork on the vertex is heard better in the left ear, also when placed on the teeth; the aërial conduction is better than the bony; the bulging of the canal is less; less discharge also; the mastoid opening has closed up very much; same treatment continued.

After this date the patient was not seen again, as she disappeared, nor could any trace be found of her. Very little could be done for the patient after she left the Infirmary as an in-door patient, as she was a woman of bad character, who stimulated freely and was very much broken down in general health. When last seen, the sinuses through the posterior bony auditory canal and behind the auricle were closing rapidly, and the discharge had become slight. It was unfortunate that the patient would not take ether a second time, that the remaining portion of the bullet could have been removed, and also that she would not remain long enough in the Infirmary to receive appropriate treatment and care.

This patient's case and the first one are interesting on account of the nature of the injuries received. Gunshot wounds of the hearing apparatus are very infrequent, although instances have been reported by Buck, Politzer, O. Wolf, and others. In the first patient the membrana tympani was undoubtedly ruptured by the twig of the tree, from the appearances of the drum-head and the history of the case. It is seldom that such accidents occur, only a few having been recorded.

Correspondence.

LETTER FROM SWITZERLAND.

Sketch of a few Foreign Health Resorts.—Pleasure-seekers under the Guise of Invalids.—A Visit to Bath.—Aachen.—The Physicians at Foreign Health Resorts.—The Cost of Living.—Carlsbad.—Mud Baths.—Diet.—Walks and Drives.—The Effects of Carlsbad Waters.—The Engadine.—Manure Heaps and Sewer Smells.—Beauties of the Engadine.—The Hotels.—The Temperature.—Ragatz and its Waters.—Kaiser Wilhelm.

RAGATZ, *August 11, 1886.*

SINCE many American patients consult physicians with reference to life at foreign health resorts, I am led to believe that even the crude observations of a medical man who has been to many of these places merely as a traveler may not be entirely unwelcome to the readers of the Journal. During a number of summer visits to Europe I have made it a pleasant professional recreation to visit such places as Aix-la-Chapelle, Wiesbaden, Baden-Baden, Carlsbad, St. Moritz, Ragatz, Bath, Leamington, and Ventnor, with a view of learning something of the means there employed for the restoration or improvement of health. This summer I have been at Ventnor, Bath, St. Moritz, and Ragatz. In what I am about to write at this time I will omit any reference to Ventnor, but say something of Carlsbad, which I saw two years ago. In the first place, it may be safely assumed, I think, that not more than a fourth of those who go to foreign health resorts do so because they think that they actually require specific medical treatment. Although they may talk of health, pleasure is what they are really seeking. There are hundreds of heads of families, with troops of more or less attractive daughters and athletic sons, with ambitious or bored mammas, now in the Engadine, at Homburg, Gastein, Schlangenbad, or Ragatz, just as they have been for merly at Richfield or Saratoga. Not many of this class, however, go to Carlsbad, although even there, among the really albuminuric, obesic, and gouty invalids, may be found men and women—hypochondriacal, discontented, or morbidly observant of their own ills—whose physicians have allowed them to undertake the rather serious business of a three or six weeks' course of treatment. Then, real invalids may have accompanying friends, with some loungers, who are simply seeing the gay world, of which this thickly peopled ravine, with its unceasing tramp of hot-water drinkers, is a part.

I was told that Bath, in England, was undergoing a revival as a health resort, and so I went there. It was out of season, for spring is the time for Bath, and yet there were not a few people with swelled joints making use of the admirably-fitted up hot baths. Some old Roman baths, on a large scale, have been lately discovered and opened, which, with other Roman remains, give to Bath considerable archæological interest. An inscription in Greek (*ἄριστον μὲν ὕδωρ*), *the best thing is water*, ornaments the portico; the ghost of Beau Nash haunts the gray old town, and his tomb, with a fulsome epitaph, is in the abbey church. The baths are connected with the principal hotel, so that access to them is easy even in bad weather, and the most rheumatic of patients may be taken to them and all about the town by means of the very comfortable hand-carriages, so largely used. Lodgings in the town are very plentiful. There is quite a pleasant park, also music, and, altogether, Bath is not an unattractive town. I should think a sojourn here, considering that it is but nine days' journey from New York, would compare very favorably with a stay at the hot springs of Arkansas.

I have been at Aachen, or Aix-la-Chapelle, twice. From all I have seen and read, and from my conversations with a very excellent physician there, I am bound to believe that it is an efficacious place for the treatment of rheumatism and syphilis. There are comparatively few mere pleasure seekers in Aachen. Like Carlsbad, it is rather too serious a place for them. It may be said once for all that the character of the physicians at German and other continental health resorts is almost invariably of the highest order. They often send patients away who do not require the particular treatment at the place where they are. Their fees are said to be moderate, and consultations, except in extreme cases, are not frequent. Aachen is not a very pretty place, and, although Charlemagne is buried there, it is rather stupid; but there is enough to occupy a real invalid, and the hotels and lodgings are good.

But let the American patient dismiss the idea, if he entertains it, that he can any more live cheaply and comfortably in any part of Europe. I have found the ordinary hotel expenses of an average traveler creeping up in the last sixteen years from two dollars and a half to four dollars and a half a day. Of course those who make prolonged stays may reduce this latter daily outgo for lodging and board somewhat.

Carlsbad seems to be just now the place of greatest renown for what it does in keeping obesity, gout, and Bright's disease in check. A course of treatment at Carlsbad has at least one virtue, which I was taught to believe as a child, and which I partly accept as a man, is an essential accompaniment of all beneficial therapeutics—that is, it is an extremely disagreeable thing. No sane person will undertake it for fun a second time. The town is situated in a very deep ravine with steep sides, so inaccessible that one has to take a drive of half an hour in an omnibus from the railway station to the springs, and, after you are in the town, it is a climb or a deep descent to get to anything. The lodging houses are tall, without elevators, the smells in the halls are of the usual continental character, and, as I have already intimated, a course of treatment is a serious matter. To get up in the morning at six o'clock and fall into a line a block long, with a leather strap about your neck, to which is attached a cup, which you fill at the hot spring when you reach it, and drink during the next twenty minutes, and return to your place twice more to pursue the same routine before you have a thing to eat, even if the weather is fine, and you have princes and millionaires, dukes and an empress for company, is anything but an hilarious occupation, even if the band plays during the whole two hours. Besides drinking, there are also baths in abundance in Carlsbad. The so-called mud baths are not so disagreeable as their name would indicate. The mud is clean. You may select your own particular pile. It is of rather a nice chocolate-color, and its contact with the skin is by no means unpleasant.

I suppose the doctors of Carlsbad make concessions to some patients in regard to the number of hours that they are to be engaged in drinking hot mineral water before breakfast. The diet is, however, carefully regulated. A Carlsbad breakfast consists of coffee and rolls without butter. Both of these are very good, however. A Carlsbad supper seems to consist of eggs and tea, while the dinner is not sumptuous.

The other day, at Andermatt, an American gentleman complained to me that overworked, jaded, and water-drinking Americans were erroneously considered, by the Carlsbad doctors, to be of the same flesh and blood as easy-going and beer-drinking Germans. He said they were treated with too great rigor, and that he had suffered for two years from the undue severity of a course of Carlsbad water-drinking; but he admitted to me that he did not do as his physician advised, and gradually taper the severe course of three weeks by three weeks' sojourn in Ragatz, and three in Swiss mountain air before going into active life. The medical men at Carlsbad lay great stress upon this latter advice. Although the springs and the houses about them lie in such a deep ravine, great pains have been taken to secure charming walks among the woods of the hill-side, with seats at very short distances apart. Even those who are quite feeble may, by means of frequent halts, take a great deal of gentle exercise without undue fatigue. There are, besides, pleasant drives through the valley and up the adjacent mountains. If one could command the weather, Carlsbad would be a place where life could always be spent in the open air, but alas! rainy seasons are not unknown, and the luckless patient may spend his whole course of treatment beneath dripping skies, and in cheerless weather even in July; but this, I believe, is not usual.

Some of the patients tell marvelous stories of the effects of Carlsbad waters—stories which have not yet found their way into medical literature. For example, one gentleman told me that a friend of his neglected the doctor's warning not to eat uncooked fruit. He died, and the forbidden plums were found in his stomach, and crusted by the waters, so as to appear as crystalline balls.

The Engadine, a narrow valley among the high Alps, about a mile wide and sixty miles long, as all the world knows, has come into great popularity as a health resort for nervous and consumptive patients. St. Moritz, Pontresina, Samaaden, and Davos have become household words among the well-to-do invalids of England and the United States. The St. Moritz Springs were commended by Paracelsus, and it is only at this place that one gets baths of mineral water in the Engadine. At the other places the dependence is upon high air alone. There is no doubt of the general purity of the atmosphere in this high valley. Cultivation not being so important, manure is not so generally banked up, perhaps under the dining-room window, as it is in many beautiful spots in Switzerland and the Tyrol.

While I am writing this letter I am occupying a pleasant room looking out upon a vineyard, a rose garden, a waterfall coming down a great gorge with mountain peaks beyond, and yet at times there come odors of the manure-heap, and if I open the door into the hall there is the smell which seems to belong to all water-closets out of England and some parts of the United States.

I understand the value of the manure-heap to the thrifty Swiss. It is a pity that it can not be kept away from the windows of living rooms. The narrow valleys of this beautiful land fairly reek with them, and they have discovered no way, except in the very best of their hotels and the newest of their streets, of keeping the air free from sewage odors, and what is true of Switzerland in this latter respect is also true of very many of even the fine towns of France and Germany. Great advance in science does not seem to enable the continental nations to rival the matter-of-fact Briton in this department of sanitation. A few nights ago I was at Tiefenkasten, a very deep valley at the entrance to the Engadine. It was raining hard, and as I stepped out to the door with the landlord a very strong odor of manure sensibly caused us both to shrink back. The dense moisture was clinging closely to the land, there being no air to carry it away, and even his inured nostrils were oppressed by the odor, and he exclaimed, "How the land stinks to-night!"

But on the heights at which patients live in the Engadine there is a wonderfully clear atmosphere without odors. St. Moritz village is a little more than 6,000 feet above the sea, Samaaden and Pontresina are nearly the same, and they are situated upon broad plateaus (I am speaking of St. Moritz baths, and not the village), with numerous small lakes and glaciers near at hand, so that the air is never impure. Besides, snow is always in full view on the higher peaks, while it may fall in the valley itself every month in the year. Of the loveliness of the Engadine it is hardly possible to write without using language savoring of exaggeration. The beauty of the snow mountains, the bright green of the valleys, the surpassing clearness of the atmosphere, the absence of the sterility usually seen at such heights, leave little to be desired in the landscape. The hotels are large and beautifully fitted up, and they furnish very good beds and food at not at all unreasonable rates. Although there are no railways in the Engadine, and most of the food must be brought up by toilsome journeys, no extortion is practiced in the hotels or boarding-houses. But there are drawbacks even to the Engadine. One needs thick winter clothing, except in the middle of the day in fine weather. We may paraphrase a famous French exclamation and say "it is magnificent, but it is not summer." As I heard a Parisian lady remark in epigrammatic style, "One may walk in the Engadine, but one can not sit down." The really anæmic people to whom the Engadine is recommended should remember these facts; besides, there are no adequate arrangements for heating the hotels at night or during cold days. The Englishman who finds 65° F. oppressive, and who goes about with a long white streamer adopted from India to keep his neck from being sun-burned in this region, and even the more sensible of that race who do not adopt this absurd precaution, are particularly fond of this highly situated valley. When I think of the everlasting dampness of Great Britain and Ireland, I am not surprised to see them in great numbers without umbrellas, but with knickerbockers, woolen stockings, and hobnailed shoes, fairly reveling in being cool without being wet. Those who are not able to take considerable exercise by walking will not find, I fear, much profit in the Engadine. Davos I have not visited, though I have been very near it. It is said to be well sheltered from the wind, and well suited for those consumptives who tolerate cold air.

I am writing this from Ragatz, situated in a beautiful valley at the mouth of the wonderful Tamina gorge. It is only about 1,700 feet above the sea, and may be exceedingly hot in summer. It is two miles from the Pfäffers springs, the waters of which are hot, from 97° to 100° F., perfectly clear, free from taste and smell, having carbonate of lime, chloride of sodium and magnesia, in their composition. The springs are so situated in a very narrow gorge that they can not be utilized at their origin except to a moderate extent, and they are therefore conveyed in pipes to the baths at Ragatz. In spite of the stories of the value of these waters in all kinds of nervous affections, diseases of the skin and the digestive organs, as well as those of most parts of the body, I think it is pretty generally conceded in Europe that they are not particularly efficacious in themselves.

Ragatz, however, used as a place of after-treatment for those who have submitted to the rigorous systems of Carlsbad and other places, is of great importance. That it is a pleasant and healthful summer resort for those who are simply overworked and tired is also true.

I am very much inclined to believe that there is great wisdom in the habits of the continental nations, especially of spending a few weeks of every summer at one of the baths. Kaiser Wilhelm is a good example in this respect.

This more than octogenarian has been punctiliously going to Gastein for years and years, and he seems to come away every summer much better for his course. There is no doubt a little pomposity and gentle-mannered humbug about the systems at some of these springs, but perhaps not more than there is in many other methods of practice. Few people reach middle life without the consciousness that the days of quick repair of the waste of the body are passing away, or without some fear that their tissues are undergoing deterioration. What better hygienic means are there for such persons, especially if they are mentally overworked in the winter, than to go where they may have regular meals, plenty of hours for sleep, gentle exercise, remote from excitements except the simple dissipations of donkey rides and German bowling-greens, Tivoli boards, and the other attractions of foreign watering-places?

I hope to live to see the day when Saratoga and Richfield will be completely under medical supervision. As we all know, no such thing exists in America, except at the hot springs of Arkansas, and possibly at St. Catherine's in Canada. Our springs are simply fashionable resorts, and each man drinks the mineral water according to his own sweet will. As in many other respects, this is a matter in which the medical profession must assert itself in order to have its authority respected. Perhaps we have not sufficiently as a profession studied the subject of the influence of mineral springs to speak with authority about the waters of our own land.

The Prevention of Insanity.—Dr. Gustavus Eliot, of New Haven, concludes an interesting paper on this subject, published in the "Proceedings of the Connecticut Medical Society" for 1866, as follows: In order to prevent the occurrence of insanity it is necessary, I. To avoid the transmission of an hereditary tendency thereto by discouraging marriage between persons of like tendencies in this direction. II. In persons with an hereditary or acquired tendency in this direction, to counteract the tendency as far as possible, 1. By insuring regularly an adequate amount of sleep, and a sufficient quantity and variety of nutritious food. 2. By securing recreation and relaxation. 3. By maintaining the action of the secretory and excretory organs. 4. By avoiding entirely the use of alcohol and other cerebral stimulants. 5. By cultivating habits of self-control. 6. By encouraging objectivity rather than subjectivity of thought, breadth and not narrowness of mental activity. 7. By avoiding anxiety and excessive mental exertion. 8. By taking disappointments philosophically, forgetting them quickly, and not brooding over the unpleasant occurrences of the past, but anticipating with cheerfulness the events of the future.

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NEW YORK MEDICAL JOURNAL,
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Edited by Frank P. Foster, M. D.

NEW YORK, SATURDAY, SEPTEMBER 4, 1886.

SPECIALISM FROM A DERMATOLOGIST'S POINT OF VIEW.

Dr. Wigglesworth, the president of the American Dermatological Association, certainly delivered a vigorous address before that body at its recent annual meeting, as will be seen by the report which we publish in another part of this issue. He devoted his attention especially to the supposed antagonism between specialists and general practitioners. As he spoke of the association's progress since its organization, ten years ago, as a career of unbroken victories over bigotry, error, and ignorance, we must infer either that he was stretching to its utmost limit the freedom generally accorded to a public speaker in dealing with facts, or else that he has been cognizant of some manifestations of "bigotry, error, and ignorance" that we have failed to detect. Far from having observed anything that could properly be called hostility on the part of the much-lectured general practitioner to the recognition of dermatology as a specialty, we have been under the impression—an impression formed from some familiarity with our dermatologists and their work, and amounting to a conviction—that it was generally acknowledged in the profession that American dermatology occupied a most creditable position.

We believe that the profession has treated the dermatologists not only fairly but generously. Since the line is to be so strictly drawn, however, shutting out the general practitioner from even the reflected light that may come from the glory of dermatology, that long-suffering individual may take it into his head that it is time to pause and consider how and by whose work that glory has come into existence, and whether he himself has not in some measure contributed to the result. Revolving in his mind the good work done by his countrymen in dermatology and the credit allowed them for it abroad, he may ask himself how much of it has been done by exclusive specialists, and certainly it is they alone who are entitled to put themselves on the specialists' side of the dividing line. It is well known that the pure dermatologists, those who practice dermatology and nothing else, are few and far between. We think they do not constitute a majority of the members of the association over whose meeting Dr. Wigglesworth presided. On the contrary, most of them (and they are among the most meritorious, too, as dermatologists) are engaged in general family practice, and many of them have achieved distinction in other special branches—branches that they have by no means given up, and presumably have no thought of giving up. Not to go beyond the field of what we happen to recall at the moment, we may mention as among the past and present members of the American Dermatological Association or of local societies devoted to the study of the same specialty a lithotritist and general surgeon of world-wide fame, a histologist equally well known, a general physician who for years has been overburdened with consultations and family practice, a devoted and accomplished anatomist, and a practitioner whose exceptional excellence as an obstetrician has escaped common recognition only from the fact that he has chosen to write on dermatology alone.

It may be that the exclusive specialists have a subtler knowledge of dermatology than others have dreamed of; we can only judge of the matter by the teaching that emanates from them. Applying that test, we feel constrained to say that a fair if not the greater share of American achievement in dermatology is the work of men who are not exclusive practitioners in that department. We have before now sounded the praises of American dermatologists, and we have therefore all the less hesitation in insisting on the groundlessness of any feeling that there is or has been or need be an antagonism between them and the profession at large. If the members can not profitably war against the belly, neither must the belly assume the existence of a strife that really has not been thought of.

ANTIFEBRIN; A NEW ANTIPYRETIC.

In the "Centralblatt für klinische Medicin" for August 14th, Dr. A. Cahn and Dr. P. Hepp, assistants at Kussmaul's clinic at Strassburg, bring forward a new antipyretic agent that, if further experience bears out their statements, is somewhat remarkable. They state that the substance itself is not a new one, being the neutral principle known as acetanilide or phenylacetamide, the formula of which they give as $C_6H_5NHC_2H_3O$. The formula may otherwise be written $C_6H_5.N.(C_2H_3O).H = C_8H_9NO$. It is a white, crystalline, odorless powder, producing a slight burning sensation when placed on the tongue, almost insoluble in cold water, more readily soluble in hot water, and freely soluble in alcoholic liquids, including wine. It melts at 113° C., and boils unchanged at 292°. Besides possessing neither acid nor basic properties, it is indifferent to most reagents. Although closely related to aniline chemically, it was found not to cause poisonous effects when given to dogs and rabbits in comparatively large doses, nor did it affect their temperature.

On the human subject the authors have tried it in eight cases of typhoid fever, five of erysipelas, two of acute articular rheumatism, four of pulmonary phthisis, and one case each of pulmonary abscess, leucæmia with fever, pyæmic fever consequent on cystitis and bed-sore, septicæmia, and ambulant pneumonia. The doses varied from four to fifteen grains, and thus far no more than thirty grains has been given in the period of twenty-four hours. The size of the dose needed can not be told beforehand; as with other antipyretics, it depends on the nature, severity, and stage of the disease and on the peculiarities of the individual, but a given amount, such as four grains, is said to produce the same effect as four times the quantity of antipyrine. The authors think it probable that decided remissions of fever are more likely to be produced by single large doses than by repeated small ones, although that has not yet been shown to be the case. Tabular statements are given of the temperature variations under the use of the drug in two cases of typhoid fever, a case of erysipelas of the leg with lymphangeitis, and one of pulmonary phthisis. In two of these records the comparative action of acetanilide and of antipyrine may be noted.

Ordinarily the effect of "antifebrin" begins to show itself within an hour, reaches its maximum in about four hours, and lasts from three to ten hours, according to the size of the dose, but usually, provided the temperature has been brought down to or below the normal point, from six to eight hours. No chills have yet been observed, but, as in the case of antipyrine, in a few instances the patients felt cold. Hand in hand with the fall of temperature goes a notable lowering of the frequency of the pulse, associated with an increase in its volume, as ascertained with the sphygmograph. No unpleasant effect on the digestive organs has been observed; in a few instances the appetite returned, probably as a result of the temporary freedom from fever. In still other cases unusual thirst and decided diuresis were manifest during the remission. None of the patients complained of the drug; their general condition was perfectly good during the hours that they were free from fever. In one of the cases of rheumatism the articular pain, which had been severe, was allayed *pari passu* with the fever. At first the experimenters felt somewhat anxious on account of a pronounced cyanosis of the face and extremities in some of the patients, but this gradually disappeared and they ceased to regard it with apprehension. In a few cases, as in the experiments on animals, the patients fell into a tranquil sleep during the remission.

Besides the efficiency of the drug in comparatively small doses, its advantages are said to be that it does not disturb the stomach, that the sweating it causes is relatively moderate, and that it is cheap. The authors warn their readers against the use of an impure article. They also mention as a matter of theoretical interest the fact that, while the other antipyretics are either phenols (such as carbolic acid, hydroquinone, resorcin, and salicylic acid) or bases of the quinoline group (including quinoline, kairine, antipyrine, thalline, and quinine), we have in acetanilide an indifferent body of widely different constitution. The authors have experimented with the acetyl derivatives of toluidine and naphthylamine, benzanilide, salicylanilide, and some other complex compounds, which they promise to report upon hereafter.

JACCOUD ON THE TREATMENT OF GOUT.

In a recent number of the "Bulletin général de thérapeutique" we find an interesting summary, taken from "Le Praticien," of a lecture on the treatment of gout, by Professor Jaccoud, originally published in "La Thérapeutique contemporaine." It is only in the interval between the attacks, M. Jaccoud remarks, that the treatment of gouty persons is really of positive avail, and at that time, as well as with persons threatened with gout, the regimen is of prime importance, sobriety and regularity as to meals and sleep being the fundamental points. The diet should be mixed, but with the vegetable element predominating. Game, shell-fish, and salt-water fish should be avoided. Pure water is the best drink, but, if it is not well borne alone, some of the lightest white or red wines may be added to it, or weak beer may be used. A gouty person should go to bed early, rise early, and take moderate exercise. This hygienic treatment should be lifelong, and should be supplemented with the whey-cure every spring and autumn.

Where this alone does not suffice, M. Jaccoud first prescribes a mixture of equal parts of milk and some highly alkaline water, such as that of the cold springs of Vichy, to be taken for at least ten days in each month, three or four glasses daily. If this is not enough, benzoate of lithine is added, from eight to fifteen grains being given every day. Where there are repeated attacks of intestinal catarrh, with a tendency to fleshiness, a large teaspoonful of Carlsbad salt should be taken every morning, on getting out of bed, in half a glass of water, for five successive days, the course being repeated every fortnight. The dose may be increased or reduced according to the laxative effect produced. Carlsbad salt has the advantage over other purgatives that it increases the flow of urine, whereas with all the others, after three moderate but repeated purgations, the urine becomes scanty and concentrated.

Such oxidizing agents as permanganate of potassium, chlorate of potassium, and oxygen by inhalation, which have been used against the gouty disposition, have been shown to be without effect. As regards mineral waters, M. Jaccoud advises Vichy and Carlsbad for persons of a robust constitution, free from heart disease, and suffering from undisguised gout. Those who are not in such good condition will find advantages in a season at Ems or at Royat. Kissingen and Homburg are especially appropriate in cases of the articular affections left after the attacks. When there are manifestations of renal lithiasis, the patient should be referred to Contrexéville, Evian, Martigny, or Vittel. For old and enfeebled subjects the waters of Ragatz are best suited.

Proceeding to the treatment of the individual paroxysms—an affair of minor moment in M. Jaccoud's opinion—he declares himself a partisan of the expectant plan as a general thing. Ordinarily he would limit interference to enjoining rest, wrapping the affected joints with cotton imbued with some anodyne liniment, and enforcing absolute or mitigated diet according as fever is present or absent. Milk is then the best article of food. Freedom of the bowels must be secured, but, if possible, without giving purgatives. It is only when the pain is exceptionally severe or the attack is unusually prolonged that M. Jaccoud thinks it well to give salicylate of sodium (forty-five grains a day) or small doses of wine of colchicum, amounting to a teaspoonful or a teaspoonful and a half in twenty-four hours.

MINOR PARAGRAPHS.

THE HUDSON RIVER STATE HOSPITAL FOR THE INSANE.

We have lately received a number of documents from which we are able to draw very satisfactory inferences with regard to the management of the State Hospital at Poughkeepsie, under the superintendence of Dr. Joseph M. Cleaveland. A training school for nurses, with special reference to nursing the insane, has been established, and ought to prove of great value to the community. Among the devices for ameliorating the condition of the patients is a system of instruction such as is given to pupils at an ordinary school, together with calisthenic exercises, in all of which, according to the report of the instructor, Mr. Charles J. Van de Mark, many of the patients have come to be much interested, including some who at the outset resented the idea of going to school. We trust that Mr. Van de Mark may prove to be correct in the statement that, as regards the influence of the school course on those of the insane who are able to attend it, "it proves to be of unequaled value in restoring them to health of mind." Be this as it may, it must unquestionably operate favorably as a diversion. The experiment is still in its infancy, the school not having been opened until last winter, but enough seems to have been accomplished to warrant the hope that instruction of the insane will be widely recognized as one of the means to be resorted to in their treatment.

THE CARE OF CHILDREN WITH TINEA IN PARIS.

The capacity of the Hôpital Saint-Louis and of the several children's hospitals of Paris having proved inadequate to the proper hospital treatment of the numerous children that are discovered to be affected with contagious diseases of the scalp, provision has lately been made for their treatment as out-patients. For this purpose some of the disused buildings of the Saint-Louis are being fitted up as day-nurseries for such children. One of our Paris contemporaries, the "Progrès médical," objects—and very properly, we think—both to the plan itself and to the irregular and unauthorized way in which a petty official is having it carried out. Out-door treatment is, of course, better for the affected children than no treatment at all, but it can scarcely be doubted that their daily movements to and from the hosptal will in many instances serve to spread their maladies among children with whom they would not otherwise come in contact. Our contemporary thinks that a third hospital for children in Paris is indispensable, and doubtless that, in the end, would prove more satisfactory and not much more expensive than the half-measure now about to be tried, or than any attempt on a large scale to treat the children at their homes.

YELLOW FEVER IN MISSISSIPPI.

As we go to press, it is reported that a number of cases of sickness in Biloxi, Mississippi, have been declared by several physicians to be cases of yellow fever, although it is added that this opinion is dissented from by other medical men. Neighboring municipalities are said to have already declared quarantine against Biloxi, as well as some distant places, including Montgomery, Alabama, and a general quarantine against the town will probably be ordered if the reports as to the nature of the sickness are confirmed. A number of the inhabitants have fled to New Orleans, not, they say, that they dread the disease so much as they desire to escape the inconveniences and annoyances of the quarantine. An unfortunate circumstance of the case is stated to be that, Biloxi being a place of summer resort, the quarantine that seems imminent will have the effect of shutting up in the town a number of people who necessarily are very anxious to return to their homes.

ITEMS, ETC.

Pneumatic Cabinets.—A correspondent writing from Ashland, Pa., states, for the information of the correspondent whose inquiry we referred to last week, that a cabinet 5 feet high, 2 feet wide, 2 feet deep at the top, 3 feet deep at the bottom, and weighing 850 pounds, is made and sold by J. A. W. Pine, 41 Johnston's Buildings, Cincinnati.

Infectious Diseases in New York.—We are indebted to the Sanitary Bureau of the Fourth Division of the Health Department for the following statement of cases and deaths reported during the two weeks ending August 31, 1886:

DISEASES.	Week ending Aug. 24.		Week ending Aug. 31.	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever	27	6	29	13
Scarlet fever	14	2	9	1
Cerebro-spinal meningitis	5	5	3	3
Measles	38	8	27	5
Diphtheria	43	24	39	21

Training School for Nurses.—A correspondent would like to obtain the addresses of the principal schools in New York State and in Pennsylvania.

The Antwerp Congress.—Mr. Clark Bell gives notice that a conference of the various committees appointed by scientific bodies and eminent alienists, to agree upon a uniform classification of mental diseases in order to secure the best basis of international statistics of the insane, in co-operation with the International Committee appointed at the Antwerp Congress, held by the Belgian Society of Mental Medicine, last autumn, will be held at Saratoga, N. Y., on September 8, 1886, at ten o'clock, A. M. Dr. Pliny Earle has been invited to preside.

The American Dermatological Association.—The officers for the ensuing year are as follows: President, Dr. H. G. Piffard, of New York; Vice-Presidents, Dr. F. B. Greenough, of Boston, and Dr. R. B. Morison, of Baltimore; Secretary, Dr. G. H. Tilden, of Boston; Treasurer, Dr. Le Grand N. Denslow, of St. Paul.

The Disinfection of Rags in Boston.—Several physicians of Boston, including Dr. Henry P. Walcott, Dr. Charles F. Folsom, Dr. George B. Shattuck, Dr. Alfred F. Holt, Dr. William F. Whitney, and Dr. Samuel W. Abbott, lately addressed the following communication to the city board of health:

"Gentlemen—We, the undersigned, requested by your board to express our opinion with regard to the disinfection of rags, as a precaution against the possibility of the introduction of cholera into this country, respectfully submit our views as follows:

"First—That the treatment of rags from non-infected ports is not necessary.

"Second—That from indemically infected ports (1) rags be disinfected to the satisfaction of the board of health before embarkation, or (2) disinfected externally in bulk at the port of entry, and also at the mills after breaking bales, or (3) disinfected after unbaling at the port of entry, at the discretion of the board of health.

"Third—That from epidemically infected ports the importation of rags be prohibited."

A report embodying the following provisions has been made to the Common Council by a special committee, and it is said to be satisfactory both to the board of health and the importers of rags:

"The committee are of the opinion that the existing regulations of the board of health regarding the disinfection of foreign rags should be modified so as to allow the admission of foreign rags into this port without special treatment, when collected in countries where contagious diseases have not prevailed during the six months prior to their shipment, if accompanied by proper evidence of origin; that all other rags should be admitted without special treatment, or be disinfected in such manner as the board of health shall determine in each instance; that all disinfection should be done under the direct supervision of the board of health, by their duly authorized agents, employed and paid by the city, and only the actual expense of disinfection should be charged the owners or consignees of the rags; that where there is difference of opinion in the board of health regarding the necessity of disinfecting any particular cargo of rags, or with reference to any particular process of disinfection, the State board of health should be consulted, and the joint action of the two boards should finally determine the points at issue."

The Editor of the "Lancet."—The "Boston Evening Transcript" announces that Dr. James G. Wakley, the editor of the "Lancet," and one of its proprietors, died on Monday, of cancer of the tongue. From the fact that we have been unable to find the announcement in any other press dispatches, we are led to hope that it may prove to have been erroneous. Although the "Lancet's" position is so secure that the loss of any one man would probably not prove a serious blow to its continued influence and prosperity, we can not forget that in a lesser degree only than to the late Mr. Thomas Wakley, who founded the "Lancet" in 1823, is the British profession indebted to Dr. Wakley for a long and continuous course in its championship and in its guidance, sometimes under rather disheartening circumstances. Nor can we be unmindful of the prejudice that might follow to the cause of the Hospital Saturday and Sunday Fund upon the sudden withdrawal of a sustaining hand so strong and so sympathetic as Dr. Wakley's.

Army Intelligence.—*Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from August 22, 1886, to August 28, 1886:*

Woodhull, A. A., Major and Surgeon. Granted leave of absence for fourteen days, to take effect on or about September 1, 1886. S. O. 197, A. G. O., August 25, 1886.

Taylor, M. K., Major and Surgeon. Leave of absence extended one month. S. O. 195, A. G. O., August 23, 1886.

Lauderdale, J. V., Captain and Assistant Surgeon. Granted leave of absence for two months, with permission to apply for one month's extension when his services can be spared. S. O. 195, A. G. O., August 23, 1886.

Gandy, Charles M., First Lieutenant and Assistant Surgeon. On expiration of his present leave of absence, relieved from duty in the Department of the East and assigned to duty in the Department of Texas. S. O. 195, A. G. O., August 23, 1886.

Naval Intelligence.—*Official List of Changes in the Medical Corps of the United States Navy for the week ending August 28, 1886.*

Clark, John H., Medical Inspector. Ordered to special duty, Portsmouth, N. H., and Widow's Island.

Kindleberger, D., Medical Inspector. Ordered to Hospital, Washington, D. C., October 1, 1886.

Gihon, A. L., Medical Director. Ordered to Hospital, Mare Island, Cal., October 15, 1886.

Robinson, Somerset, Medical Inspector. Detached from Hospital, Mare Island, Cal., October 15, 1886, and to wait orders.

Spear, J. C., Medical Inspector. Ordered to Naval Laboratory, New York, September 28, 1886.

Bloodgood, Delevan, Medical Director. Ordered to Hospital, Norfolk, Va., September 29, 1886.

Taylor, J. Y., Medical Director. Ordered to Naval Laboratory, New York, September 29, 1886.

Dean, R. C., Medical Director. Detached from Naval Hospital, New York, and to wait orders.

Simon, W. J., Surgeon. Detached from U. S. Steamer Constellation, and ordered on special duty at the Naval Academy, Annapolis, Md.

Henry, C. P., Assistant Surgeon. Ordered to Hospital, Philadelphia, Pa.

Fitts, H. B., Passed Assistant Surgeon. Detached from Hospital, Philadelphia, Pa., and to wait orders.

Stone, E. P., Assistant Surgeon. Ordered to receiving ship New Hampshire.

Society Meetings for the Coming Week:

Monday, *September 6th:* Medico-chirurgical Society of German Physicians; Morrisania Medical Society (private); Utica, N. Y., Medical Library Association; St. Albans, Vt., Medical Association; Providence, R. I., Medical Association; Hartford, Conn., City Medical Association; Chicago Medical Society.

Tuesday, *September 7th:* Elmira, N. Y., Academy of Medicine; Buffalo Medical and Surgical Association; Ogdensburg, N. Y., Medical Association; Medical Societies of the Counties of Franklin and Niagara (Lockport), N. Y.; Hudson, N. J., County Medical Society (Jersey City); Androscoggin, Me., County Medical Association (Lewiston).

Wednesday, *September 8th:* New York Pathological Society; American Microscopical Society of the City of New York; Medico-Legal Society; Medical Societies of the Counties of Albany, Cayuga, and Montgomery, N. Y.; Philadelphia County Medical Society (conversational); Worcester, Mass., District Medical Society (Worcester).

Thursday, *September 9th:* Society of Medical Jurisprudence and State Medicine; Brooklyn Pathological Society; South Boston, Mass., Medical Club (private); Pathological Society of Philadelphia.

Friday, *September 10th:* New York Academy of Medicine (Section in Neurology); Yorkville Medical Association (private); Medical Society of the Town of Saugerties, N. Y.

Letters to the Editor.

CHRONIC INFLAMMATORY DISEASE OF THE UTERINE APPENDAGES.

Birmingham, *August, 1886.*

To the Editor of the New York Medical Journal:

Sir: In your issue of June 26th Dr. Henry C. Coe says that my protest against the sentiments expressed in Dr. Coe's paper is uncalled for, and that, if I had waited until I had read the original article, I would have found that Dr. Coe entirely agrees with me in believing that the expression "Tait's operation," as applied to normal ovariotomy, is a misnomer. But I have read Dr. Coe's paper, and I find that the misrepresentation there is more serious than it was in the abstract which appeared in your columns. The paper is a misrepresentation of my views in almost every instance where my name occurs. Further, the paper is in its pathology, in my opinion, almost as inaccurate as it is futile in its surgical predictions.

In the letter to which I am now replying Dr. Coe regrets exceedingly that I should have allowed myself to be so much irritated at an imperfect "society's report." Dr. Coe is mistaken about the irritation; it is a matter of regret and not of irritation to me that any one on your side of the Atlantic should fall into the misrepresentations which are so common amongst the ignorant and prejudiced people on this side.

I am, of course, much gratified by Dr. Coe's expressions of admiration for myself and my work contained in the letter to which I am now replying; but I should be much more appreciative of this admiration if he had not so effectually concealed it in the paper which is the subject of discussion.

I am, etc.,

LAWSON TAIT.

Proceedings of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Meeting of June 23, 1886.

The President, Dr. JOHN A. WYETH, in the Chair.

Dr. FREEBORN, of the Committee on Microscopy, made a final report on the specimen of enlarged bronchial glands presented at a recent meeting. After examining more than thirty specimens, he had finally found a tubercle bacillus.

In the tumor of the brain which had been presented at the last meeting by Dr. Putnam Jacobi, he had been unable to find any evidence of carcinomatous deposit.

The tumor which had been presented by Dr. W. Gill Wylie, which he had thought might be a calcified ovary, had been found on section to be a dermoid cyst.

Large Fibroid of the Ovary.—Dr. H. MARION-SIMS presented a fibroid tumor of the ovary which was unusually large; it weighed between five and six pounds. The patient was sixty-three years of age, and had first observed enlargement of the abdomen in March last. The operation was done three weeks before. The temperature had not risen above 99·5° F. The tumor had a long and rather broad pedicle; it was double, a condition which he had never witnessed before.

Spindle-celled Sarcoma of the Breast.—A specimen was presented by Dr. BANGS. In the tumor there was a sanguineous cyst which contained about three tablespoonfuls of fluid. He had operated about two weeks before. The patient was thirty years of age, had been married nearly five years, and had not been pregnant. About four years before she had noticed in the breast a lump of the size of a hazel-nut. At the end of three years and a half it had increased to the size of an English walnut. In December, 1885, she had sustained a severe blow on the breast, after which the tumor had grown rapidly. In May last two thirds of the mammary gland were involved. The tumor was freely movable and unattached to the pectoral muscle; it was hard and heavy to the feel. Just above the nipple deep fluctuation was observed. The patient made a good recovery from the operation. A single enlarged axillary gland was felt, but it was not removed. It had disappeared to the touch since the operation. Dr. Frank Ferguson had examined the tumor, and pronounced it a spindle-celled sarcoma containing a sanguineous cyst.

The PRESIDENT inquired of Dr. Bangs whether he could give any statistics as to the relative frequency of the different kinds of tumors of the breast. He had operated for a considerable number of tumors of the breast, but he had never seen a sarcoma of that organ.

NEW YORK COUNTY MEDICAL ASSOCIATION.

Meeting of June 21, 1886.

The President, Dr. CHARLES A. LEALE, in the Chair.

Certain Points in the Diagnosis of some of the Infectious Diseases.—Dr. E. G. JANEWAY read a paper in which he discussed more particularly certain points in the diagnosis of small-pox, typhus, and typhoid fever. His object was not so much to bring out new facts as to call attention to cases with more or less obscure symptoms and to show the necessity for bearing in mind the differential points. He first took up the question of the diagnosis of small-pox. This was not difficult even to one who had seen only a few cases when the disease presented its usual symptoms. But our health laws were such that the student of medicine had little opportunity to become acquainted with the disease clinically until after he entered practice. For several years past, vaccination had been so commonly practiced and isolation of small-pox cases so rigidly and early enforced that there had been only occasional opportunities for the general practitioner to see cases in this country. Unfortunately, however, there had recently been some reaction; vaccination was not now so generally practiced, and the outlook for future immunity from the disease was less promising.

One of the best safeguards against an error in the diagnosis of small-pox was to bear in mind a classification of the varieties as dependent upon the symptoms. One of the most important forms of the disease, and one in which an error in diagnosis was liable to take place, was the hæmorrhagic, or purpuric. This was often mistaken for a malignant type or other infectious diseases, more particularly scarlet fever and measles, or for purpura hæmorrhagica. A most important question in a doubtful case was, Had there been any exposure of the patient to a disease which might manifest itself in this way? Had the patient visited a strange place, had he been getting new clothing, had a stranger arrived in the neighborhood? Special inquiry should be made as to whether there had been any exposure about fourteen days before the disease developed. The author cited a case of purpuric variola seen in consultation in which the symptoms were obscure and the patient's physicians had scarcely taken the possibility of small-pox into consideration. On careful inquiry it was found that the contagion had come from a patient in another town who was nursed and buried publicly through the interest of some charitably disposed ladies. One of the physicians acknowledged that he had never seen, nor even heard of, this form of variola. The case in question established the importance of three facts in making a diagnosis in a case of malignant small-pox: 1. The importance of learning the nature of the disease from which this malignant case, not possessing in itself positive features, had developed. 2. Should the patient be dead, this might be learned by investigating others exposed to the original case; these, perhaps having a milder form, might manifest the more characteristic symptoms of the malady. 3. The result of exposure to the malignant case might give a clew to its nature. The cases of malignant small-pox which Dr. Janeway had seen had proved fatal about the fifth day of the disease.

Another case was cited which illustrated the importance at times of making an autopsy in order to decide upon the nature of the disease. The case had been reported while he was a member of the board of health as one of death due to cerebro-spinal meningitis. Dr. Janeway examined the body with Dr. J. B. Taylor, who was at the head of the vaccination corps. The patient had lived six days after his first illness. There had been severe headache, backache, vomiting, and fever, but no rigidity of the neck or the back. There were some twenty petechial spots on the abdomen. At one place there was a vesicle. There was no eruption on the face or extremities. A careful post-mortem examination was made, and the certified cause of death was changed to small-pox. The people in the neighborhood where the patient had resided had been vaccinated, excepting one man who had nursed the patient and who refused to be vaccinated, denying that she had died of small-pox. Within two weeks he sickened and died of small-pox, thus confirming the diagnosis based on the post-mortem examination. This patient's physician, a careful practitioner, had not suspected variola.

Scarlet fever was likely to be diagnosticated in cases of variola which began with an efflorescence, followed shortly by dark spots and patches, for in some cases petechiæ and hæmorrhagic spots appeared. If vesicles were present, they were mistaken for sudamina. An examination should not be considered complete which left out the chest and abdomen, and particularly the inguinal and axillary regions Small-pox was liable to be mistaken for measles under two circumstances: first, before the development of the vesicles, the appearance of the skin and general symptoms led to the diagnosis of an ordinary case of measles; second, in severe cases of small-pox, the skin being red and showing dark-colored patches, accompanied by hæmorrhage from the nose, etc., the diagnosis was at first made, perhaps, of scarlet fever, and a little later the case was called one of black measles. The author had known of several instances in which an outbreak of small-pox in this city was due to mistaking hæmorrhagic variola for black measles.

As to the diagnosis between small-pox and syphilis, one was much more likely to mistake the syphilitic eruption for variola than to mistake variola for syphilis. The multiformity of the rash, the condition of the glands, and the duration of the disease would decide in a large number of cases in favor of syphilis, and further aid in diagnosis would often be found in the history.

A mistake between variola and varicella was not infrequently made. The differentiation between typical cases was sufficiently easy, but the student was often troubled by the want of clearness in the differential points found in text-books. A mistake was liable to result from paying too much attention to the form of the eruption. In purpura variolosa there was no specific eruption, and one who attempted to differentiate between this and other forms of small-pox or other diseases by the appearance of the eruption would err. The author had known of mistakes in diagnosticating between variola and herpes. This might occur in cases of herpetic eruption on the face, associated with cerebro-spinal meningitis. He had known not a few cases of urticaria to be mistaken for small-pox. In scarlet fever, when the characteristic eruption was present, there was little difficulty in making a diagnosis; but the early cases of an epidemic were liable to go unrecognized.

In childhood especially there might be great difficulty in differentiating between typhus and typhoid. An instance was cited in which typhus fever prevailed in an asylum, and at the same time several cases of typhoid fever developed without typical signs, but the lesions found at the autopsy were those of typhoid. A cessation of the fever about the end of the second week would, in a doubtful case, lead to the suspicion of typhus; but it was to be remembered that some cases of typhoid were of short duration. When two or more persons were exposed to the same cause of fever, and became sick with a febrile complaint, it was probable they were suffering from the same disease, although the symptoms might to some extent differ. Typhus might also be mistaken for cerebral inflammation, especially cerebro-spinal meningitis, because of the peculiar petechial eruption in the latter. The author, however, had never seen an eruption in cerebro-spinal meningitis which reminded him strongly of that of typhus. If herpes was present in a given case, the disease was, in all probability, neither typhus nor typhoid fever. In a recent German work on diseases of the skin he had found the statement that bluish spots on the pubes were due to the presence of the *Pediculus pubis*, and that they marked the trail of the animal as it passed from the pubes to the axilla. But he had given some attention to this question, and he had found the blue spots without the pediculus, and the pediculus without the blue spots.

Meningitis was so seldom a complication of typhus and typhoid that its existence in a doubtful case would lead to the suspicion of tuberculosis. If there were tubercles in the lungs, it would be strong evidence against the existence of typhus or typhoid. Examination of the sputum for the *Bacillus tuberculosis*, under proper precautions, might be of diagnostic value. He had seen some cases in which typhus or typhoid developed in a patient suffering from phthisis.

Pyæmic fever, especially when developed in connection with an old otitis media, might be mistaken for typhus or typhoid fever. If jaundice should develop, it would point rather to septic fever. Regarding the so-called typho-malarial fever, he thought it was typhoid modified by malarial poisoning. Intense malarial poisoning was capable of producing a considerable variation in the ordinary course of typhoid fever, but in a large experience in New York he had very rarely found at autopsies on typhoid patients evidences of the existence of malarial poisoning. One marked exception had been reported by him to the association the present year. In some other portions of the country this combination, without doubt, would be found more frequently. Probably, however, even in a malarial district, many cases of typhoid fever would run a characteristic course if undisturbed by medication.

Physicians hesitated to speak of a disease as being typhoid unless it ran the usual course of typhoid fever, but in outbreaks of this disease there were always cases which ran a course of not more than from three to ten days. He could cite instances in which thirty or more people in an institution were sick from a poison producing the symptoms of typhoid fever, most of the cases running the usual course, but in some the duration of the fever being quite short—showing that the poison of typhoid fever might produce a fever of short duration.

The difficulty of diagnosticating between a malignant fever and ulcerative endocarditis was illustrated by a case from which he presented the specimens. The patient was twenty-seven years of age, who had had rheumatism from boyhood until five years ago. He had had disease of the heart at least since his sixteenth year. His fatal disease commenced with a chill, severe headache, backache, and pain in the shoulders. The pain in the back was increased by motion. The afternoon temperature was higher than that of the morning, and varied from about 100° to 104° F., but the patient was given salicylate of sodium and antipyrine. He died on the seventh day of his illness. The last days there was some epistaxis, with moderate delirium, stupor, tympanites, and tenderness over the abdomen. Dr. Janeway saw the patient toward the close of the fifth day. Typhoid fever had been suspected, but on careful examination he reached the following conclusions: That the man was much more stupid than patients usually were at that period of typhoid fever; delirium had commenced on the third day. There was a mitral regurgitant murmur, but added to this there was a slight soft systolic murmur at the base of the heart, which looked suspicious, as if there were a new disease of the heart valve. The next day he looked carefully for hæmorrhagic spots, but could find none in the ordinary light of the room. On opening the shutters and placing the patient in the light, he discovered petechial points behind the ears, on the forehead, and on the abdomen. He told the attending physician that he thought it was a case of ulcerative endocarditis, that it was assuming the fever form because the same petechial spots seen over the body were probably present also in the internal organs, particularly in the brain. He saw the patient on the next day, when something had occurred which he had never before seen. The spots on the forehead and behind the ears were a little larger, and those on the abdomen were a little more numerous, but the fact of interest was the appearance of numerous petechial extravasations, larger than any of the others, on the soles of the feet and on the palms of the hands. On the arms and legs scarcely a petechial spot could be found. At the autopsy the kidney (there was only one) was found studded with minute dark-red extravasations of blood; in some places there were somewhat large infarctions. On the middle leaflet of the aortic valve there was a considerable bunch of vegetations. The mitral valve was thickened, somewhat shortened, and insufficient, but free from stenosis. This valve at one point also showed mycotic inflammation. The left ventricle was somewhat enlarged. The case illustrated very well the possibility of mistaking ulcerative endocarditis for a malignant process of another nature—in the early history, for typhoid fever; subsequently perhaps for the hæmorrhagic form of some fever, such as typhus or variola.

Dr. Janeway referred in the course of his remarks to the suit of Brown *vs.* Purdy, and said he thought that in the case of contagious diseases, where the physician was required by law to express an opinion regarding the nature of the disease and report to the board of health, he should be no more liable to punishment for an erroneous opinion than the judge on the bench whose decision was reversed on appeal.

The President referred to a case in which four physicians were unable to reach a positive diagnosis. The patient died within forty-eight hours. This and a similar case illustrated the difficulties which the physician met with in diagnosis and the evil which might result to him and to the community were the decision in the case of Brown *vs.* Purdy sustained on appeal.

AMERICAN DERMATOLOGICAL ASSOCIATION.

Tenth Annual Meeting, held at Greenwich, Conn., Wednesday, Thursday, and Friday, August 25, 26, and 27, 1886.

The President's Address.—The president, Dr. Edward Wigglesworth, of Boston, opened his address with the remark that it was just ten years since he had the honor of calling to order the first public meeting, at Philadelphia, for the organization of the association, when for the first time the specialty of dermatology received national acknowledgment. But, he said, its guerilla warfare was now over, and its record since that time had been one of successive victories over bigotry, error, and ignorance. Its day of paladins was past, and its ranks would admit more recruits. There was still occasion for more extended instruction in dermatology in the medical schools, while the lack of proper facilities for the hospital treatment of persons with skin diseases was a disgrace to municipalities, to hospital boards, and to the medical profession itself; for, as things were now among us, nearly everywhere, the hospitals either wholly refused residence to this large class of sufferers, or, when they did receive them, did not, it might fairly be said, offer them the best medical treatment it was possible to procure. Some progress had been made, however, as was shown by the special hospital in New York, besides two wards in Charity Hospital, and by the three special clinics with beds at as many institutions in Philadelphia. The sole local organization, the New York Dermatological Society, was as active as ever in its good work. The speaker then alluded to some of the achievements of the association itself, and said that much still remained to be done. The idea of specialism, already rooted, was to be nursed and trained into the minds of the profession and of the public. An elaborate division of labor was as useful and successful in a learned profession as in the mechanical arts, for it was merely a relative question of height of standard. Specialism substituted quality for quantity, which substitution was the essential characteristic of civilized man as distinguished from the savage, while the rapidity of such substitution gauged the progress of civilization itself. Medicine was merely that complex whole which resulted from the combination of all its component parts, and their individual advancement was the criterion of its own progress. Medicine was exact knowledge specially directed to the physical welfare of mankind, and specialism was only that further subdivision rendered necessary by the very various parts composing the individual, and made possible by the extension of our opportunities for studying these parts, in consequence of the increase of mechanical means for enlarging the field of our senses. Nobody could to-day take all knowledge to be his province; science did not culminate in a Jack-at-all-trades, least of all in one whose conscience had become anæsthetized by custom, who confounded his own limitations with those of human understanding and his own ignorance with the immaturity of medical therapeutics. The specialist built his own boundary wall, and could not, if he would, poach upon the preserves of others. He distinguished what he could do from what he could not, thus filling the old definition of the best physician. He could not maltreat a patient, and then, when compelled to confess ignorance and seek superior wisdom, charge the wronged sufferer another and a still higher fee for a "consultation," which was in reality a confession. It had been sarcastically said that the sole duty of the family doctor nowadays was to decide what specialist should be summoned. It certainly was his duty, and a very important one as a man of honor, to decide whether any one, and, if any one, who, could probably accomplish what he admitted that he himself had failed in. Unfortunately, many knew so little that they were even ignorant of how much was known by others; but in many respects the specialists had already raised the average standard of requirement for general practice to such an extent that much of the old routine practice of physicians who treated their patients for the very diseases for which they referred members of their own families to the specialist had now become punishable malpractice. But the general practitioner had his revenge in opposing as unnecessary the hospital appointment, and even the private practice, of the very specialist to whom he himself fled as "a very present help" in time of trouble. We had been told that the human body was made up of parts and functions so thoroughly interdependent that it could not be parceled out into defined and isolated regions. It could and it could not. Who would divide a country into square miles and attempt to become thoroughly conversant with every atom in each of those miles? The special divisions of study were rather the flora, the fauna, the geological strata, etc., although all of them might pervade every mile of the region alike. If regional surgery was possible, then certainly there was no bar to specialties. We heard of "appalling pathological conglomerates" due to lack of proper "general medical treatment." Not only "conglomerates," but often single lesions were very variously diagnosticated by different general physicians, and the "conglomerates" were usually merely the aggregated effects of original causes which might have been obviated by proper investigation in due season on the part of suitable specialists. The aforetime "consulting physician" was one who, in addition to his general acquirements, knew more about some particular thing than anybody else. We might be sure that his general acquirements had to pay the penalty. To-day we honestly admitted this, and, renouncing the practice obtainable by general acquirements, kept to that particular thing of which we knew most. Nobody now had ability enough to add to the greatly extended knowledge necessary to the general physician the intensified acquaintance with detail needed by the specialist. Life was too short for the ablest intelligence to exhaust even any one specialty. The physician might, like Newton, "think the thoughts of God after him," but the thoughts of the Infinite upon the smallest molecule of matter called for more than the limits of our existence. The true consulting physician of to-day was the specialist, and he should therefore receive this title at the hospitals with which he was connected, while those ex-physicians, called consulting but never consulted, should receive their true and proper title of *emeriti.* But enough of the "idea of specialism"; the public would in time appreciate the absurdity of being content with inferior results in one branch of medicine because, forsooth, there were so many others in which their medical adviser was equally or more at home. It would reason rather that he who insisted upon doing the work of ten men manifested a quality of mind which could only be called arrogance, and which challenged for his work severe criticism. Versatility would not atone for crude and imperfect work any more than lack of time, the hurry of life, the keenness of competition, or financial necessity would; and it was mere brazen self-assertion which delighted not so much in doing the thing well as in showing how well it could do it. Not omniscience, but infinite morality, was the duty of the specialist, and this, conscientiously carried out, would blunt the sharpest dart of the hostile general practitioner. The speaker then alluded to matters of detail in which the association's work could be continued to advantage.

Erythanthema Syphiliticum.—Dr. Edward Bennet Bronson, of New York, read a paper the purpose of which was to call attention to certain cutaneous eruptions of an erythematoid character occurring in connection with syphilis, and, so far as possible, determine their ætiology. A case was reported of a syphilitic patient in whom a peculiar eruption developed upon the head, hands, and feet. Although the eruption presented no pronounced syphilitic characteristics, it was regarded as due to syphilis for the reasons that it was shortly followed by an outbreak of well-marked specific efflorescence on various parts of the body, and, moreover, there was a transformation of the eruption upon the head into infiltrated lesions presenting a distinct syphilitic character. The eruption first appeared on the face, in the form of an erythema, which was covered with vesiculo-papular efflorescences. Subsequently a similar outbreak occurred on the nape of the neck. The vesiculo-papules broke, leaving excoriated surfaces of a diphtheroid character, from which there exuded an exceedingly abundant, foul-smelling discharge. Soon after, vegetating growths made their appearance, which upon the bearded parts of the face were quite exuberant, and resembled condylomata acuminata. After a week or two the erythematous areas, which formed the bases of the vegetating lesions, became the seats of a gradually increasing copper-colored infiltration. The palms and corresponding surfaces of the fingers were covered with a deep-red, sharply circumscribed erythema, which was followed by lamellar desquamation. Upon the body and limbs several crops of well-marked syphilitic papules succeeded each other, and, finally, all the manifestations yielded rapidly to mercurial treatment. The preliminary eruption in this case was characterized as an erythanthema dependent in some way upon the specific disease. Allusion was made to the syphilitic roseola as a possible case in point; then to the preliminary erythematous eruptions observed in hereditary syphilis—the *érythème précurseur* of the French—and to certain forms of coincident or preliminary erythema as described by Hebra, Neumann, Danielssen, Lipp, and Finger. Attention was next called to that class of symptoms which had been characterized by Mauriac as syphilitic erythema nodosum, and three cases of this affection were reported, in one of which the erythematous eruption was apparently succeeded by a syphilitic infiltration that pursued a course similar to that of a breaking-down gumma of the skin. It was held that probably these various erythematoid eruptions were not equivalent in their mode of origin to the syphilodermata, but rather to certain angeioneurotic or angeioneuritic affections, which they closely resembled.

Dr. I. E. Atkinson, of Baltimore, thought great caution should be exercised with regard to the specific lesions of syphilis. Lesions similar to those described by Dr. Bronson were not of excessive rarity in cachectic subjects and in cases of malignant syphilis, but in his experience they had always been manifestations of late or tertiary syphilis.

Dr. J. C. White, of Boston, thought more exact data were needed before these affections could be regarded as a necessary sequel of syphilis, or as anything more than accidental occurrences. While there was nothing *a priori* against a causal relation, such relation had not been proved. The early roseolous exanthematous condition of the skin in syphilis was wholly unlike the rare forms of dermatitis which had been described in the paper.

Dr. F. B. Greenough, of Boston, said that syphilitic roseola seemed to be decidedly distinct from other forms of congestion of the skin, especially in the fact that during the subsidence of the congestion little points of distinct congestion continued for a long time. These appear to represent the follicles.

Dr. G. H. Tilden, of Boston, thought that in the present state of our knowledge it would be more philosophical to consider the appearances described as accidental than as dependent upon the specific disease.

Rubella (Rotheln).—Dr. Atkinson read a paper on this disease, which was regarded as distinct from measles and scarlet fever. The period of incubation varied between two and three weeks. In many cases there was no prodromal stage. Catarrhal symptoms were generally absent, but they might be present. Sometimes there was congestion of the throat. Swelling of the lymphatic glands was a peculiar and marked symptom. This swelling was painful, but did not pass on to suppuration. In many cases fever was absent. The eruption first appeared on the forehead and face, and in the course of a few hours spread to other parts of the body. It was more or less irregular, being more intense in some situations than in others. From first to last the eruption was usually out three or four days. In the greater number of cases desquamation failed to occur. Complications and sequelæ were not unknown, the most common being bronchitis, pneumonia, and gastro-intestinal disorders; renal affections also might follow. Relapses occasionally occurred, but not later than the end of the second week. The prognosis was almost always favorable. On account of the confusion existing as to the nomenclature of this disease, the speaker suggested that rubella be accepted as its proper title, and that it might be known in popular language as epidemic roseola.

The President thought that the terms morbilli and rubeola or *Rötheln* should be used to signify what was termed German measles, and that roseola should be reserved as the title for the rose-colored spots seen in syphilis and other conditions. There did not seem to be any necessity for the introduction of a new term.

Lymphadenoma (Mycose Fongoide) with Autopsy.—The Secretary read for Dr. G. H. Fox, of New York, the history of a case of this affection which had occurred in Mrs. G., aged thirty-three years. During pregnancy, in the summer of 1881, she had suffered with general pleuritis which had passed away after her confinement, in October. A year after, small, flattened, circular tumors had appeared in the axillæ and on the breasts. These had become moist and had been accompanied with a burning sensation. The eruption had disappeared from these situations and had reappeared upon the back and other portions of the body. After the birth of her last child, in February, 1885, a tumor had developed at the inner angle of the left scapula. The lesions on the other parts of the body had disappeared with the exception of two spots on a finger and one on the left cheek. The tumor on the left scapula had gradually softened and disappeared. The patient was admitted to the hospital in October, 1885, and was fairly well nourished. There were at that time numerous tumors on the body, some of them being superficially ulcerated. The worst tumors were on the breast. Fowler's solution was administered hypodermically, without benefit. Chaulmugra-oil was given in increasing doses until forty drops four times daily had been taken, without causing any improvement. The patient died in April, 1886. The microscopical examination gave the usual appearances of these growths. The internal organs were found to be normal.

A Note relative to the Bullous Eruption occurring after the Ingestion of Iodine Compounds, by Dr. J. N. Hyde, of Chicago, was read by the Secretary. The author described several cases of such eruptions, and in conclusion presented the following interrogative propositions:

1. Are there not three sub-forms of the bullous exantheme developed in certain individuals after the ingestion of iodide of potassium? 2. Is not the first and most common of these to be generally recognized in persons of advanced age and cachectic condition, the rash being then present in the form of typical bullæ? 3. Is there a second and still rarer sub-form, in which the eruption is displayed in di- or poly-morphic manifestations, typical, perfect bullæ being then mingled with papules, tubercles, scarlatiniform maculations or with other and different lesions? 4. Is there not a third and rarer sub-form, the quasi-bullous rash to be most frequently recognized on the face and dorsal aspect of the hands and forearms of infants and children, where the lesions are semi-solid, slightly umbilicated and filled with inspissated yellowish matter, and which may shrivel and desiccate on the suspension of the drug inducing the condition? 5. Is this last-described lesion one to be recognized solely as the result of the ingestion of iodide of potassium, never under other circumstances, and one as peculiar to the special condition it represents as is the gumma to syphilis?

Dr. R. W. Taylor, of New York, said that the ingestion of iodide of potassium might cause dermatitis, with multiform lesions, with bullæ which might contain serum, pus, or even blood. He thought that some of the cases of extreme dermatitis multiformis which had been described had been due to this cause.

Dr. J. E. Graham, of Toronto, said that a young man, who had contracted syphilis, had taken a preparation of the iodide of potassium containing five grains to the dose. Two days after, there had been a bullous eruption, principally on the face and neck. The dose had been increased, and in two days the eruption had been much augmented. The remedy had been discontinued and the eruption had rapidly disappeared.

Dr. Atkinson said that, a year before, he had seen what had been supposed to be a case of malignant syphilis. The patient had had syphilis and had been put upon iodide of potassium. The lesions had continued to increase, and, after the iodide had been taken for six months, he had seen the patient. There was an enormous formation of scar-tissue over the face and neck, and there were also bullæ and elevated infiltration plaques. The use of the drug was stopped, and in six weeks the ulcerations had healed, the cicatricial tissue, of course, remaining.

Precocious Gummata.—A paper with this title was read by Dr. Taylor, of New York, who, after a thorough consideration of the subject and the presentation of a number of illustrative cases, presented the following conclusions: 1. Like the osseous affections, affections of the nervous system, malignant syphilides in general, besides many other affections, the gummata syphilæ may be precocious in appearance, occurring as early even as the second month of infection, but unusually in the third or fourth month, or after that time. 2. That of the precocious gummatous syphilide or gummata there are three quite clearly marked forms—first, the early, general, and copious form; second, the more localized form, which may invade several regions, is usually symmetrically distributed and sometimes even is confined to one region, particularly one side of the face or scalp and the roof of the mouth; and, third, a form in which more or less severe neuralgias precede and accompany the eruption, which in many particulars resembles simple erythema nodosum, but which in its ætiology is not in any way related to this simple form of eruption, but is a direct outcome of the syphilitic diathesis. 3. That these precocious gummata partake in general of the features of those of later forms, but that they differ in the more acute invasion in a much more rapid course, and are usually not so profound and destructive in their action as the classical eruption. 4. That of these precocious forms of gummata there are found to be two varieties—one a non-ulcerative or resolutive, the other ulcerative. 5. That, in the treatment of these precocious gummata syphilides, a combination of mercury and iodide of potassium is much more efficacious than is mercury alone.

Clinical Notes on Scabies.—Dr. Greenough, of Boston, said that he had had the opportunity of studying a large number of cases of scabies and had been much interested by the rapid increase in the number of cases seen during the past few years. The number had rapidly increased from 3 in 1879 to 160 during the last year. He had during the past year also made inquiries as to the number of members of the same family of whom the patients could give an account as being similarly affected, and he had records of 110 such cases, which, with 6 cases seen in private practice and the 160 above reported, made a total of 276 cases that had come under his cognizance during the past year. The percentage of cases of scabies had varied from 0·3 per cent. in 1876 to over 13 per cent. during the past year. In explaining this great increase in frequency, he said that during the war the disease had naturally increased and the medical officers had obtained a knowledge of it, which they had carried with them into private practice after the war was over. The disease, being properly treated, had become less frequent, so that the new generation of physicians had seen little of it, and each case not recognized had proved a focus of contagion for a large circle. The facts which were especially noticed were the few cases in which typical burrows could be found; the great constancy of the manifestations on the penis in male subjects; the difference of the symptoms produced by scratching, according to the situation of the lesion and the success of treatment. He had used almost entirely an ointment consisting of two parts of sulphur, one of carbonate of potassium, and three of petroleum ointment, simply cautioning the patients against applying it to inflamed and pustular localities.

Dr. A. R. Robinson, of New York, said that he had reached a positive conclusion in some cases by opening a vesicle and examining its contents under the microscope, and finding the young acari or traces of them.

Dr. Bronson, of New York, said that in many cases he had depended largely upon the elongated character of the efflorescence in making the diagnosis. For three months he had treated all cases of scabies with naphthol, using a fifty-per-cent. preparation, rubbing the body thoroughly with this once. This had produced a satisfactory result.

Dr. S. Sherwell, of Brooklyn, said that, as a prophylactic in the treatment of scabies, he always directed the patient to sprinkle on the sheet of the bed a teaspoonful of the dry sulphur. This acted as a disinfectant and was unpleasant to the acarus.

(*To be concluded.*)

ALUMNI ASSOCIATION OF THE WOMAN'S HOSPITAL.

Second Meeting.

(*Continued from page 109.*)

The Surgical Treatment of Subinvolution.—In the discussion on Dr. Dudley's paper (see page 256), Dr. Clement Cleveland, of New York, said that the views expressed by Dr. Dudley were very sound. He had had no experience in the treatment of subinvolution of the womb by surgical procedure where there was no laceration, but Dr. Dudley's experience, he thought, demonstrated the value of the operation. The speaker said that he performed the operation, however, even when there was only slight laceration of the cervix, for the reason that there was subinvolution with all of its attendant symptoms, and the result of such treatment had been satisfactory. He did not believe, as some gynæcologists seemed to, that the operation of trachelorrhaphy was being resorted to without conscientious regard for the welfare of the patient.

Dr. P. H. Ingalls, of Hartford, thought that Dr. Dudley had done right in operating in these cases, and in not trusting to general treatment, but he could hardly conceive of a patient having subinvolution of the uterus to a degree requiring the operation if there had not been some injury during delivery.

Dr. C. H. Riley, of Baltimore, approved of Dr. Dudley's thorough method of treating these cases, but he could hardly see the necessity for making an effort to cut the artery. Of course it would bleed, but he did not know why it should deplete the uterus more than the system in general.

Dr. W. E. Moseley, of Baltimore, said that, although he agreed with Dr. Dudley as to the need of a thorough cervix operation in cases of subinvolution, as it would be followed by more complete involution of the uterus, still the operation had failed in one case of what Dr. Thomas called chronic areolar hyperplasia in a virgin uterus. The depth of the uterus was between three and four inches, and the change since the operation had not been marked. He thought, however, that in subinvolution of the uterus after pregnancy the results of an operation were most happy.

Dr. G. W. Porter, of Providence, asked the author whether he performed the operation upon theoretical or purely empirical grounds in cases in which there was no marked laceration of the cervix.

Dr. J. S. Hawley, of New York, had heard only a part of the paper, but he thought there was not the slightest doubt that, in laceration of the cervix with subinvolution, applications and medical treatment had failed repeatedly, and it brought the question of treatment down simply to an operation.

Dr. A. H. Buckmaster, of Brooklyn, thought that in many cases of subinvolution the utero-sacral ligaments played a more important *rôle* than was generally believed. A woman rose too soon after labor, and the heavy uterus dragged on those folds of peritonæum and connective tissue which formed the only ligament to the uterus worthy of the name. This dragging caused the symptom so characteristic of the condition—severe back pain. If, with the forefinger before the cervix and the middle finger hooked far back in the *cul-de-sac*, the cervix was drawn down, the pain was much increased, and might be reproduced when absent. If there was a low grade of inflammatory action in these ligaments, an irritation would be produced inciting a general pelvic congestion, and this explanation would account for the symptoms. The value of rest in the recumbent position need not be spoken of, and he thought that the good results of Dr. Dudley's treatment had been achieved in a large measure by its beneficent influence. The speaker had paid special attention to the condition of the utero-sacral ligaments while at the Woman's Hospital, and had usually found them very tender in cases of enlarged uterus with pain in the back and over the pubes. Dr. Dudley had, he said, made deductions from measurements of the uterus. That was apt to be a source of error. It was seldom that two examiners gave the same result in measuring the depth of the uterus. The condition of the uterine tissue and the amount of force employed would account for the difference in measurement.

Dr. Sherman Van Ness, of New York, thought that the interest of Dr. Dudley's paper would have been added to had he mentioned the nature of the tissue removed when no laceration of the cervix was apparent; for he agreed with a preceding speaker that, in cases in which the symptoms were those of a laceration, there must be some tissue which approached at least the cicatricial tissue found in laceration, and which Dr. Dudley had removed. Why simple removal of a triangular piece of tissue from the cervix should cause a decrease in the size of the whole uterus he was unable to say.

Dr. W. H. Baker, of Boston, said that he could not take an opposite view from that of Dr. Dudley. He had seen so many cases brought from the out-patient department in which medication had been employed for subinvolution, and he had found that there had apparently been good results in that the depth of the uterus had been reduced, perhaps, from four inches to three, or from five inches to four or three and a half; but, after a short time, the patients would return in just as bad a condition as before the treatment had been instituted. The uterus, instead of having remained permanently reduced in size, had become enlarged again. He thought that, in order to excite a new action in the uterus, and to enable involution to take place which would remain permanent, it was better to do some operation, and he believed the one devised by Dr. Gordon, referred to by the author, was the best; it had certainly given the best results in such cases in his experience.

Dr. Dudley said it was true that where there was subinvolution there must have been some injury to the genital tract. He had stated in his paper that subinvolution was the result of some injury, but it was not always a laceration of the cervix; it was not always the result of a plug of cicatricial tissue in the cervix. It might result from various causes, as from getting up too early after confinement, or from long, tedious labor, or from sudden detachment of the placenta, or from an endometritis existing while the woman was carrying the child (a case of which he had seen). All of these causes contributed to prevent the retrograde metamorphosis of the uterus, although no laceration of the cervix existed. He cut the circular artery in order to rapidly deplete the uterus, and allow it to contract before the circulation became re-established. In one case in which he thought he had failed to cut the circular artery, absorption took place much more slowly, and the symptoms were much longer in disappearing. As to the nature of the tissue removed where no laceration existed, the mucous and submucous tissue was hard from previous applications, but the tissue beneath was softer than usual, and more congested than in laceration of the cervix.

Dr. Porter asked whether in taking out the V-shaped piece it was done with the idea of causing temporary depletion, or with the idea of producing permanent injury of the main branch of the circular artery and atrophy of the uterus. Also whether a straight incision of equal depth would not be sufficient.

Dr. Dudley thought that simple division of the tissues would not answer the purpose. He operated with the idea of producing atrophy of the uterus as one would do in ablating the tonsil. The V-shaped piece was not more than a quarter of an inch in breadth at its base, and it was removed from a cervix which was enlarged.

Dr. BAKER asked whether, if the operation was intended simply to check the blood supply, it would not be sufficient to ligate the artery.

Dr. DUDLEY said that by cutting out a V-shaped piece he diminished the size of the enlarged cervix, bled, and cut off the circulation, and thus produced the retrograde process in the uterus. Simply cutting or ligating the uterine artery might establish the retrograde process; he did not know whether it would or not.

Book Notices.

Cholera; its Origin, History, Causation, Symptoms, Lesions, Prevention, and Treatment. By ALFRED STILLÉ, M. D., LL. D., etc. Philadelphia: Lea Brothers & Co., 1885. Pp. 164.

THE author's name is a sufficient guarantee of the character of this little volume. Although short and unpretentious, it covers the important subject pretty thoroughly. The subject-matter is arranged under eight heads—viz., the history of the disease, its ætiology, symptomatology, complications and sequelæ, morbid anatomy and pathology, the diagnosis and prognosis, prevention, and treatment. Some interesting facts are given concerning the ætiology of cholera, which Dr. Stillé regards as still unsettled, although he is positive that the disease never arises *de novo.* The symptomatology is presented in graphic style. Unlike most writers, the author contents himself with a description of the symptoms in a typical case, and does not confuse the reader by introducing a number of hypothetical conditions, reserving exceptions for the next chapter, on complications and sequelæ.

The section on morbid anatomy is a model of brevity and clearness; it represents the results of actual observation at the post-mortem table, rather than mere book-work. Dr. Stillé is not a follower of Koch, nor has he been led to change his views, expressed before the discovery of the comma bacillus. "Nothing," he thinks, "can be simpler than the mechanism of cholera viewed as a gastro-intestinal hyperidrosis, nothing is more mysterious than the mechanism of the primary cause which gives rise to it." The section on prevention is good, the author maintaining the necessity of quarantine "not in the literal, but in the official sense of that word." The treatment of the disease is admirably described in thirty well-worded pages. The author's style is elegant but forcible. The general make-up of the book is highly creditable to the publishers.

The Regimen to be adopted in Cases of Gout. By WILHELM EBSTEIN, Professor of Clinical Medicine in Göttingen. Translated by JOHN SCOTT, M. A., M. B., etc. London: J. & A. Churchill, 1885. Pp. 68.

THIS is a scientific monograph by a clinical teacher who sets forth his views clearly, and in a manner calculated to prove serviceable to the practitioner. Ebstein believes that it is possible, by a judicious method of living, to exert a powerful influence, both in preventing the disease and in modifying its course. What he says here is based on the results of experience and on scientific knowledge of the nature of gout. He gives an outline of his experiments made for the purpose of working out the physiological history of the disease, and his results have enabled him to establish the proof that uric acid is a chemical poison which can cause inflammatory and necrotic processes in animal tissues, and also that in gout there is not a retention but an increased production of this material. The aim, then, in the treatment is to reduce the production of uric acid formation in general, and here one naturally has to deal, not only with the quality, but also with the quantity of the food to be allowed.

Insomnia and Other Disorders of Sleep. By HENRY M. LYMAN, A. M., M. D., Professor of Physiology and of Diseases of the Nervous System in Rush Medical College, etc. Chicago: W. T. Keener, 1885. Pp. x–239. [Price, $1.50.]

IT is pleasant to find a book which is clearly the result of a natural literary effort and the author's fondness for his theme —a book not written to "supply a long-felt want" or "to fill an existing gap." Dr. Lyman's is such a one, and shows that the subject of which he writes has been a pleasant study. It is readable and full of interest, and is quite up to the times, which is important, as the last work upon sleep, a very good one by the way, was written by Dr. Hammond nearly fifteen years ago. Dr. Lyman agrees with Mosso that sleep depends rather upon molecular disturbance than upon fluctuations in the blood-supply, which is the modern and generally accepted theory.

His consideration of the pathological states which induce wakefulness are especially full and practical, and his therapeutical suggestions, despite a tendency to polypharmacy and rather heavy dosage, are in the main excellent.

A Treatise on Bright's Disease of the Kidneys; its Pathology, Diagnosis, and Treatment. With Chapters on the Anatomy of the Kidney, Albuminuria, and the Urinary Secretion. By HENRY B. MILLARD, M. D., A. M., Member of N. Y. County Medical Society, etc. Second Edition, Revised and Enlarged. New York: William Wood & Co., 1886. Pp. xiv–264.

No physician can consider himself properly equipped for practice without a thorough understanding of the various phases of nephritis. Not only should the conventional clinical data be thoroughly understood, but the scientific practitioner should go deeper and familiarize himself with the subtle pathological phenomena which lie at the root of Bright's disease, as that term is understood in its broadest sense. To the practitioner who looks at the subject of kidney inflammation from this scientific point of view, Dr. Millard's book will prove welcome. The intimate causal relationship existing between kidney derangements and a host of nervous and other phenomena makes the study of the former affections of the very first importance to the physician, be the latter's special predilections in practice what they may.

Surgical Delusions and Follies. A Revision of the Address in Surgery for 1884 of the Medical Society of the State of Pennsylvania. By JOHN B. ROBERTS, A. M., M. D., etc. Philadelphia: P. Blakiston, Son, & Co., 1884. Pp. 52.

AN exceedingly readable little book, full of useful hints. On some of the points touched upon there is room for discussion, but, as a whole, what is put down is safe practice, and what is condemned either has been or ought to be discarded.

The Student's Guide to Clinical Medicine and Case-taking. By FRANCIS WARNER, M. D. Lond., F. R. C. P. Second Edition. Philadelphia: P. Blakiston, Son, & Co., 1885.

THIS is another of the popular Student's Guide series which the publishers have issued in very compact, convenient, and economical form. The object of the work has been well stated in the preface to be "to provide, in small space, a guide for the student to use at the bedside, when wanting to know what to look for and what to note." When we say that the work has been well done and that the volume, small and unpretending as it is, would be a valuable acquisition to the young or old practitioner, we do not intend to merely damn it with faint praise.

The Medical Graduate and His Needs. By George C. Wellner, M. D. Detroit: George S. Davis, 1884. Pp. iv–100.

The author remarks in his preface that the fact that this volume is "the only one of the kind may serve as its *raison d'être*." Would that it were so. We have seen one or two others of the kind, and their general tenor is about the same. The medical graduate is a much-advised man; but no doubt he needs to be. Far be it from us to see nothing to admire in this little book. There are some valuable hints on the personal bearing of the physician, on diagnosis, and on prognosis. The advice regarding post-graduate study is sound and sensible.

We regret to state that the author's style is not always so lucid as it might be. However, he generally states his opinions in forcible English.

Reports on the Progress of Medicine.

GYNÆCOLOGY.

By HENRY C. COE, M. D., M. R. C. S.

The After-treatment of Difficult Cases of Laparotomy.—Müller read a paper on this subject at the recent meeting of the German Gynæcological Society ("Centralbl. für Gynäkologie," 1886, No. 26), in which he laid particular stress upon the occurrence of intestinal complications after laparotomy, especially the adhesion of the gut to the stump or abdominal wound. The reader had had two deaths in his own practice from intestinal obstruction, caused by the formation of constricting bands of organized lymph. In order to avoid this accident, he recommends that the binder be dispensed with after laparotomy, so that the anterior abdominal wall will not be pressed against the intestines. Moreover, in cases in which a number of adhesions have been tied during the operation, it is advisable to prevent agglutination of the intestine to the wounded spots by thoroughly irrigating the peritoneal cavity with carbolized water during the first few days.

Chronic Hyperplastic Endometritis.—Heinricius, of Helsingfors, contributes an elaborate article on this well-worn theme to the last number of the "Archiv für Gynäkologie." After an exceedingly exhaustive review of the literature, the writer reports in full sixty-three cases, and then gives the results of his microscopical studies. His description of the minute anatomy of "fungosities," illustrated by a series of beautiful drawings, is the most satisfactory that has appeared since Olshausen published his oft-quoted paper in the same journal (Bd. viii, Hft. 1). He distinguishes an interstitial and a glandular form of fungous endometritis, between which there are many transitions. Sections of the fungosities, when examined under a high power, showed a stroma, consisting of stellate cells with numerous delicate interlacing processes, between the meshes of which were numbers of large oval cells, and small round or spindle-shaped ones; the former were supposed to be endothelial cells, the latter leucocytes. Capillaries were present in excess, while in many spots there were true interstitial hæmorrhages. Hypertrophied glands abounded, all of which were lined by columnar epithelium, but there was nowhere any evidence of malignant degeneration. He decided, from an examination of many specimens removed by the curette, that the submucous layer was never scraped away by the instrument. He at no time found any decidual cells in the sections, even in cases where the *endometritis fungosa* was assumed to be a direct consequence of a previous abortion. Of course, decidual remains may undergo organization and form polypoid growths, but these are essentially different from fungosities, the latter being the result of a general chronic inflammation of the endometrium. He has never seen either a carcinomatous or sarcomatous degeneration of the fungoid growths, or a recurrence of the same with malignant characteristics. The writer's views on diagnosis and treatment, although admirably presented, offer nothing new.

Retroflexion of the Uterus.—Vedeler, of Christiania (*Ibid.*), from observations in upward of three hundred cases, expresses a number of radical opinions, of which the following are the most important: Retroflexion is unattended by symptoms in forty per cent. of the cases; this applies to all degrees of displacement, and to every period in the life of the woman. Retroflexion may be produced experimentally without giving rise to symptoms. Moreover, the symptoms which were ascribed to the displacement often persist after the uterus has been restored to its normal position. Besides, a careful history of many cases will show that before the retroflexion occurred the patient complained of the same pain which was afterward attributed entirely to the displacement. Finally, retroflexion is a condition possessing a certain amount of anatomical interest, but it is of no significance from a pathological standpoint.

A Method of Disinfecting Tupelo Tents.—Herff ("Berliner klin. Woch.") recommends the following process for rendering tupelo tents aseptic: They are immersed for twelve hours in a solution containing one part of iodoform, or corrosive sublimate, to sixty parts of ether. The tents swell rapidly, but resume their usual size as soon as the ether evaporates. They are kept in bottles hermetically sealed.

The Differential Diagnosis of Uterine Fibroid and Distension of the Fallopian Tube.—Horrocks ("Brit. Med. Jour.," March 27, 1886) notes the following points of difference between these affections: 1. Menorrhagia is a frequent symptom of fibro-myoma, while it is not characteristic of tubal disease. 2. In cases of pregnancy a distended tube will be elevated with the growing uterus, while an intra-pelvic fibroid will only be raised slightly above its original position. 3. Fibroid tumors frequently become smaller as the result of involution, while distended tubes suffer no change. 5. Violent pelvic pains limited to the time of menstrual periods, or occurring just before them, point to disease of the tubes.

Climacteric Diabetes in Women.—Mr. Lawson Tait contributes a short article on this subject to the "Practitioner" for June, 1886, in which he refers to a number of cases in his own practice, a study of which has led him to the conclusion that there is a special form of diabetes occurring in women at the time of the menopause which is peculiarly resistant to treatment, although it may be self-limited. He argues with Lecorché that the distressing eczema vulvæ which usually accompanies this glycosuria is not due simply to the irritation caused by contact with urine, but to the general dyscrasia. Tait thinks that the sufferings of the patient may be mitigated, and probably the duration of the disease lessened, by the use of opium; locally he applies some ointment which will "arrest the process of fermentative change in sugar," sulphur being preferred.

Silk-worm Gut and Iodoform in Hystero-trachelorrhaphy.—Dr. Sutton reports in the "Medical News" for July 3, 1886, fifty cases of operation for lacerated cervix, the details of which were as follows: The denudation was accomplished in the usual manner, and the opposite edges were united with sutures of silk-worm gut, the ends of which were left long. About a drachm of iodoform was then sprinkled over the cervix, the patient was put to bed, and was not disturbed until the seventh day, when the vaginal douche was used for the first time after the operation, preparatory to removing the sutures. Sepsis was absent in all but one case, and union was obtained in all. No bad results followed the free use of iodoform. [The real advantage of this method lies in the fact that douches are dispensed with, and hence a trained nurse is not needed.

The Use of Cocaine in Gynæcology.—Dr. G. W. Johnston has an elaborate paper on this theme in a recent number of the "Medical Record." After a general introduction on the value of anæsthesia for gynæcological purposes, the author discusses the use of cocaine in cases of vaginismus, quoting from various authors. He concludes that, although transient local anæsthesia is undoubtedly obtained, so that vaginal examinations, coitus, etc., become painless, even in aggravated cases, the indiscriminate application of the drug "is productive of no permanent good, and too often indirectly induces an aggravation of the very disease which it is sought to relieve." Reference is made to the disadvantages of ether in gynæcology, chief among which are the dread which is experienced by nervous women at the thought of being anæsthetized, as well as the straining on the stitches by the vomiting of the patient after recovery from the narcosis. The use of cocaine, on the other hand, is restricted; the anæsthesia is limited to a small area, and to the superficial tissues, while there is a complete absence of that general loss of muscular rigidity (as in ether-narcosis) which is so necessary in most gynæcological operations. The writer prefers the stronger solution of cocaine (20 per cent.) recommended by German surgeons, although weaker solutions are efficacious where only superficial anæsthesia is desired. Before applying the drug, the surface should be thoroughly scrubbed with an antiseptic solution and then dried. After penciling with the cocaine solution, the operator should apply a piece of absorbent cotton soaked in the same and allow it to remain in contact with the tissue for some time. The deeper tissues may be reached by interstitial injections. Operators do not wait long enough, as a rule; from two to fifteen minutes is the time necessary for complete loss of sensation, according to different authorities, though the writer has obtained the maximum effect of a twenty-per-cent. solution in from four to six minutes. In operations in which extensive denudation is necessary, the solution must be repeatedly applied to the raw surface, after sponging away the blood. By denuding and uniting the edges of the wound from below upward, "areas to be denuded and united may be cocainized step by step as the operator comes to them." Numerous cases of operations on the vulva, vagina, and uterus, performed under cocaine-anæsthesia, are reported, a few of which occurred in the author's practice. [The paper is particularly valuable by reason of the bibliography, which is quite exhaustive. The data, except in the author's own cases, are rather too uncertain to allow of any positive deductions. It should not be forgotten that the cervix uteri is often remarkably insensitive, so that great care is necessary in judging of the anæsthetic effect of cocaine when applied to this region.]

The Early Diagnosis of Cancer of the Cervix Uteri.—Dr. Palmer discussed this important question at a recent meeting of the Cincinnati Academy of Medicine ("Med. and Surg. Reporter," July 24, 1886). He considered two sources of error: the confounding of scirrhus with fibrous hypertrophy of the cervix, and of epithelioma with benign disease of the cervical mucous membrane. The vascularity of the cervix is increased during the early stage of carcinomatous infiltration, so that it assumes a bluish or reddish color. The finger detects small nodules beneath the mucous membrane, while the latter gives the impression of being more closely adherent to the subjacent tissue. It is not only extremely difficult to detect these early changes in a cervix which was previously the seat of erosion, but the patient rarely applies to her physician until the ulcerative stage is well advanced. The general condition does not always give a clew to the true affection. It is often necessary to watch a cervix for a long period and to note the inefficacy of local treatment before we can decide as to the presence of malignant disease. Obstinate leucorrhœa, erosion, and induration in patients of advanced age should always be regarded with suspicion. Even the microscopical evidences may be uncertain, in the absence of positive clinical proof. Certain forms of fungoid degeneration remain for a long time on the line between simple and malign growths, and then suddenly assume malignant characteristics. The author believes firmly in laceration of the cervix as an exciting cause of epithelioma, especially in cases in which there has been no attempt at repair.

Miscellany.

Lyons Theses.—During the months of May and June, as we learn from the "Union médicale," the inaugural theses submitted to the faculty of medicine on pharmacy were as follows: P. Bernard, "Attempts at Rape on Little Girls"; F. Crozat, "An Experimental Study of the Action of Nitrate of Silver on the Cornea"; A. Cuche, "The Treatment of Cataract during the last fifteen years in the Ophthalmological Service of the Lyons Hôtel-Dieu"; A. Garand, "Sulphate of Sparteine, especially its Action on the Heart and the Circulation"; H. Laffage, "The Variations of the Pulse in Childhood, especially in Febrile Diseases"; C.-L. Bobichon, "Posterior Torticollis of Muscular Origin"; L. Porteret, "The Prognosis of Affections of the Vitreous."

The French Academy of Medicine Prizes for 1887.—According to the "Union médicale," the arrangements for the prizes for 1887 are as follows: *The Academy Prize* (1,000 francs).—"Vaginal Hysterectomy; the Indications and Operative Procedures." *The Argenteuil Prize* (10,000 francs).—This prize, which is sexennial, will be awarded to the author of the most notable improvement in measures for the cure of urethral strictures, or to the author of the best work on the treatment of other diseases of the urinary passages. *The Barbier Prize* (2,000 francs) will be given to the discoverer of the most efficient means of curing diseases considered incurable, such as rabies, cancer, epilepsy, scrofula, typhus [!], cholera morbus [!], etc. "Encouragements" may be accorded to those who come nearest to attaining the object without actually accomplishing it. *The Henri Buignet Prize* (1,500 francs) is for the best written or printed work on the applications of physics or chemistry to medicine. Works by foreigners are excluded. *The Capuron Prize* (1,000 francs).—"Post-partum Involution; the Changes and Pathological States which Result." *The Civrieux Prize* (1,000 francs).—"Vesical Neuralgias." *The Daudet Prize* (1,000 francs).—"Actinomycosis." Authors must present original observations made in France. *The Desportes Prize* (1,200 francs) for the best work on practical medical therapeutics. *The Ernest Godard Prize* (1,000 francs) for the best work on external pathology. *The Hygiene of Infancy Prize* (1,000 francs).—"A Clinical Study of Athrepsia." *The Laval Prize* (1,000 francs) for the most meritorious medical student. *The Lefèvre Prize* (2,000 francs).—"On Melancholia." *The Auguste Monbinne Prize* (1,500 francs).—A fund to be expended for scientific missions, etc. *The Portal Prize* (600 francs).—"On Primary Renal Tuberculosis." *The Saint-Lager Prize* (1,500 francs) for experiments to produce goître in animals by administering substances extracted from the water or earth of goîtrous regions. The prize will not be awarded unless the experiments have been successfully repeated by the Academy's commission. *The Vernois Prize* (800 francs) for the best work on hygiene. Competing essays for all these prizes must be sent to the Academy before May 1, 1887, written in French or Latin, accompanied with a sealed envelope and a device to identify the author. The condition of concealment of the author's name does not apply to contestants for the Argenteuil, Barbier, Buignet, Deportes, Godard, Monbinne, and Vernois prizes.

Pasteur Institutes in Russia.—According to the "Deutsche Medizinal-Zeitung," Pasteur institutes have been opened in Moscow and in Odessa.

The Electric Light in Theatres.—Dr. P. Renk, professor of hygiene at Munich, has recently endeavored to solve the following problem: Given a spacious theatre crowded during an evening performance for a certain number of hours, what is the difference of the effects on its atmosphere produced by the electric light or by gas, particularly as to the temperature and the generation of carbonic acid? Taking the Theatre Royal of Munich, which is lighted by 1,400 lamps on the Edison system, he tested the two kinds of illuminants, with the following results: During a representation which lasted from 5.30 to 10.15 P. M., and was witnessed by 1,790 people, he found that, while the rise in temperature in the pit was 11·1° C. with gas, it was only 7·7° C. with the electric light, and that in the upper gallery it was 10·7° with the former, and not more than 7·4° with the latter. As to the increase in the production of carbonic acid, the results were equally important. In the pit it was as 2,176 with gas to 1,221 with the electric light, and in the upper gallery as 2,855 with the first to 1,430 only with the second.—*Lancet.*

Female Medical Students in Prussia.—The "Gazette hebdomadaire de médecine et de chirurgie" states that the Prussian Minister of Public Instruction has decided that women can not be admitted to any of the Prussian universities, either as students or as auditors.

Professor Tarnier.—The "Gazette hebdomadaire de médecine et de chirurgie" announces that the Senate of the University of Edinburgh has conferred an honorary degree on M. Tarnier for "the great services he has rendered to science and humanity by the introduction of antisepsis into obstetrics, by the invention of a *couveuse*, by the discovery of new methods for diminishing the mortality of infants, and above all by the marked improvements he has made in the construction of the forceps."

Dr. Nathan S. Davis.—The "British Medical Journal" says: "The leading position assigned to Dr. N. S. Davis, of Chicago, by his countrymen as president-elect of the approaching International Medical Congress at Washington, and the prominent position of honor assigned to him at the annual meeting of the British Medical Association at Brighton, will make many of our readers desire to know more of the professional life-history of this venerable and respected physician. Dr. Davis received the degree of Doctor of Medicine from the Regents of the University of New York in 1837, and has been engaged in the practical duties of the profession from that time until the present. In 1844, while a member of the New York State Medical Society, he originated the movement that resulted in the permanent organization of the American Medical Association in 1847. At the annual meeting of that association in 1851 he read a valuable paper, giving the results of original investigation in regard to the effects of different kinds of food and of alcoholic liquors on the temperature of the human body, etc. His contributions to medical literature since have been valuable and numerous. In 1850 he was elected Professor of Principles and Practice of Medicine in the Medical College in Chicago, and Professor of Clinical Medicine in the Mercy Hospital, which positions he continues to hold at the present time. He was president of the American Medical Association during the years 1864 and 1865. In 1879 he received the honorary degree of LL. D. from the Illinois Wesleyan University. He is an honorary member of the New York Academy of Medicine, of the College of Physicians of Philadelphia, and of many other scientific and medical societies in his own country. In 1883, the American Medical Association having decided to publish its transactions in the form of a weekly medical journal, Dr. Davis was chosen its chief editor. In 1886 he was appointed secretary-general, and, after the death of the late Professor Austin Flint, he was unanimously elected president of the Preliminary Organization of the International Medical Congress to be held in Washington in September, 1887. The above is a brief description of Professor Davis's career. It remains only to state how highly he is esteemed by his compeers in the United States. He stands now as the recognized head of the profession in his country, the successor of the lamented Flint and the other great men who preceded him. Probably no physician in the United States has done more to keep up the tone of the profession, and to make the profession one solid, earnest body, desirous of advancing science, benefiting humanity, and adding to the glory of the country."

The Surgery of the Liver.—At the recent meeting of the British Medical Association, Mr. Lawson Tait read a paper before the Surgical Section in which he gave the statistics of fifty laparotomies undertaken for disease of the liver or of the gall-bladder. They included 7 exploratory incisions, with 1 death; 13 hepatotomies, with no death; and 30 cholecystotomies, with 3 deaths, 2 of the latter being from the subsequent progress of cancer of the liver.

The Health of Boston.—Of the 179 deaths reported to the Board of Health, for the week ending August 28th, 5 were from diphtheria, 4 were from typhoid fever, and 1 was from measles. There were 56 deaths among children under one year of age and 76 among those under five years of age. There were 7 deaths from violent causes, including 1 suicide.

A Prize for Physicians of the State of New York.—We have been asked to publish the following announcement:

"The Medical Society of the State of New York offers to physicians of this State a prize of one hundred dollars, from the proceeds of the Merritt H. Cash Prize Fund, for the best essay on any medical subject that shall be approved by its Committee on Prize Essays. Essays for this prize must be printed, by type-writer or otherwise, and sent to the Committee without any indication of authorship. The names of authors should be indorsed in sealed envelopes accompanying the essays, and bearing upon the outside mottoes or other devices which are duplicated on the essays. Essays for competition must be sent to the Chairman of the Committee, Dr. George F. Shrady, 247 Lexington Avenue, New York, N. Y., on or before December 20, 1886, in order that the Committee may have time to examine them and report at the next annual meeting of the Society, February 1, 1887.

"W. Manlius Smith, *Secretary*."

THERAPEUTICAL NOTES.

Hydrastis Canadensis in Uterine Hæmorrhage.—Some doubt having arisen as to the propriety and the entire safety of using this drug in cases where it is desirable not to cause contractions of other muscular structures than that of the blood-vessels, in consequence of Fellner's having reported that it caused uterine contractions in some of the lower animals, Professor Schatz has investigated the question ("Berl. klin. Wchschft.," 1886, 19; "St. Petersb. med. Wchnschft.," 1886, 30), and does not find that it produces any such effect in the human subject. He concludes, therefore, that hydrastis is especially useful in hæmorrhages due to myomatous growths in cases in which their forced expulsion from the uterus would be likely to be attended with evil consequences; in relaxation (eccentric hypertrophy) of the uterus where, after the removal of its contents, it becomes baggy, thus favoring a renewal of the bleeding; in all cases of hyperæmia of the genital organs in which either ergot does not suffice to cause contraction or the alternation of contraction and relaxation serves only to increase the hyperæmia; in cases of acute or chronic pyosalpinx, in which it is important to diminish the hyperæmia without provoking contraction of the tubes; and in chronic peritonitis, oophoritis, etc. It can not be replaced by digitalis, since the latter acts unfavorably on the digestion.

Tar Bandages.—Prokhoroff ("Wratsch"; "Lancet") applies a gauze bandage to compound fractures and suppurating wounds, and smears it freely with tar. Fresh tar is applied daily, but the dressing is not changed. The author speaks highly of the results, although his cases are not thus far very numerous.

The following notes are taken from the "Gazette de gynécologie," a new monthly journal founded and edited by Dr. P. Ménière:

The Removal of the Mucous Plug from the Cervix Uteri.—Dr. Ménière wraps the end of a probe with fine charpie, and dips it into a mixture of one part of alum and ten parts of glycerin, then passes it into the cervical canal and rotates it rapidly, at the same time rubbing the surface. Thus the plug of mucous is detached.

An Application for Pruritis Vulvæ.—The same author recommends the following:

Glycerite of starch	30 parts;
Zinc oxide	6 "
Potassium bromide	10 "
Extract of Indian hemp	2 "

The application should be preceded by a hip-bath, or by bathing with very hot linden-water.

A Modified Chlorodyne, prepared according to the following formula, is used by Dr. Ménière after violent uterine hæmorrhages and in acute painful affections of the uterus:

Chloroform	2½ drachms;
Ether	75 grains;
Alcohol	2½ drachms;
Morphine hydrochloride	¾ grain;
Hydrocyanic acid (1 to 10)	75 grains;
Tincture of *Cannabis indica*	75 "
Glycerin	750 "
Essence of mint	5 drops.

Iodol in Gynæcological Practice.—The same author has used iodol with good results in cases of granular degeneration and erosion of the cervix. He uses a solution containing:

Iodol	1 part;
Glycerin	15 parts;
Alcohol	30 "

He has also used the solution with equally favorable results in a few cases of muciparous inflammation of the vulva in young lymphatic subjects.

THE NEW YORK MEDICAL JOURNAL, SEPTEMBER 11, 1886.

Lectures and Addresses.

LECTURES ON
THE DIAGNOSIS AND TREATMENT OF DISEASES OF THE CHEST.

DELIVERED BEFORE THE ASCLEPION CLUB,

By BENJAMIN F. WESTBROOK, M. D., BROOKLYN,

PHYSICIAN-IN-CHIEF TO THE DEPARTMENT OF THORACIC DISEASES, ST. MARY'S HOSPITAL; PRESIDENT OF THE BROOKLYN PATHOLOGICAL SOCIETY; FELLOW OF THE AMERICAN LARYNGOLOGICAL ASSOCIATION; ETC.

LECTURE III.

(*Concluded from page 256.*)

The *treatment* of double pleurisy with effusion consists in the adoption of the most energetic treatment in the way of counter-irritants and stimulants of the cerebro-spinal and sympathetic nervous systems. When fluid is detected in both pleural cavities, even though the amount be not very great, I believe that aspiration should always be resorted to without delay in the hope of preventing a collapse of portions of the lungs, and consequent congestion and œdema of the remainder. If pericardial effusion were diagnosticated, it would undoubtedly be proper to perform paracentesis of the pericardial sac. The counter-irritant should be applied to the entire surface of the chest, so as not only to have its effect upon the pleuritis, but also to modify the coexistent inflammation of the bronchial mucous membrane and lessen the secretion of mucus. We should not forget, at the same time, to avail ourselves of the revulsive effects of the active hydragogue cathartics, if the strength of the patient is sufficient to warrant it.

Chronic serous pleurisy, by which term we mean the indefinite retention of a serous effusion in the pleural cavity with no signs of its reabsorption, is to be treated primarily by aspiration, and this should be followed by counter-irritants and the use of alterative drugs. In aspirating under these circumstances it is not always well to attempt to remove the entire amount of the effusion at one sitting. When the fluid begins to run rather slowly with a good vacuum, and the patient commences to complain of drawing pains in the chest, or if violent paroxysms of coughing occur, the tube should be at once withdrawn. The operation may be repeated in a day or two if the quantity remains stationary or becomes increased, but in some instances one partial aspiration is enough to initiate the process of absorption, and it will then go on under the influence of judicious constitutional treatment until all the fluid has disappeared. Should the fluid show a tendency to reaccumulate, it is better to repeat the aspiration before it has regained its original level. If we find, after repeated attempts, that it is impossible to withdraw all or a considerable quantity of the fluid, even though no grave symptoms be observed at the time, I believe that it would be wiser to resect some of the ribs at once and cause the thorax to contract, as only in this way can the lung and thoracic walls ever be brought into contact each with the other. While I have never done the operation for this purpose, I can recall some cases in which I believe that it might have been the means of saving life.

One very interesting case occurred some years ago when I was connected with the dispensary of the Long Island College Hospital. The patient was a 'longshoreman, between forty and forty-five years old, who had contracted an acute pleuritis from exposure to cold on the piers. The cavity of the right chest was probably two thirds full of serous fluid when he presented himself at my clinic in the dispensary. As the man was poor and required constant attention, I secured his admission to the wards of the hospital, where he came under the care of the late Dr. Armor. Dr. P. H. Kretzschmar, who was Professor Armor's assistant at the time, became very much interested in the man and attended him with great care. In order to reduce the amount of fluid in the thoracic cavity, copious diaphoresis was induced by means of the fluid extract of jaborandi, administered, if my memory is correct, in half-drachm doses every two hours. Under this treatment, which was, of course, supplemented by attention to the general nutrition of the patient, the effusion was reduced at least one half within two or three days, and the patient, feeling considerably better, returned to his home, where I subsequently attended him. I employed in his treatment the various alterative remedies usually resorted to in such cases, but without avail, until finally, after the lapse of perhaps a month from the time when I first saw him, the effusion having remained stationary since his discharge from the hospital, I determined to withdraw the remainder of it with the aspirator. I was very much chagrined to find, after the removal of only a few ounces, that no more could be abstracted, though the vacuum in the aspirating bottle was good and the suction so great that a visible depression of the intercostal spaces was observed. The pain was very great and the presence of the fluid was undoubted, not only because of the unmistakable nature of the physical signs, but because the needle introduced through the thoracic wall could be moved with the greatest freedom in every direction, making it evident that it was opposed by nothing denser than a fluid. The lung on the affected side subsequently underwent caseation, tuberculosis developed, and the patient died. In this case I think it altogether probable that, had the aspiration been attempted earlier, say during the time of his presence in the hospital, the fluid might all have been removed, and, if that were not the case, or, if, even at the time when aspiration was attempted and the removal of the fluid was found to be impossible, a resection of the ribs had been done, so as to allow a collapse of the side and adhesion of the lung with subsequent expansion, the fatal issue might have been avoided. I believe that resection of the ribs should not be reserved exclusively for the treatment of empyema.

Another means for promoting the reabsorption of the fluid in chronic pleurisy is persistent counter-irritation, either by applications of iodine or of Corson's paint, or by repeated blistering. Among medicinal agents the most reliable is the syrup of the iodide of iron, given in as large doses as the patient will bear; that is, from half a drachm to one drachm three or four times daily. In addition to this, the iodode of sodium or potassium, or other diuretics, may be employed. Among the best of the old-fashioned combinations is the pill of squill, digitalis, and calomel. The *Apocynum cannabinum* might be used. Diaphoretics are also of service. When small amounts of fluid remain unabsorbed, or where the side remains contracted and the lung does not freely expand to its original dimensions, it is said that the inhalation of compressed air is of great value. This can be secured either through the apparatus of Waldenburg or some of its modifications, or by means of the pneumatic cabinet of Dr. Herbert F. Williams. This method would scarcely be of use except in such cases as those to which I have alluded, but in them it is worthy of a trial, and might prove valuable in the prevention of subsequent secondary disease.

From this hurried consideration of the serous forms of pleurisy we must now pass on to the subject of *suppurative pleuritis*, or *empyema*. The diagnosis and treatment of this condition demand very careful attention, for it is a disease which seldom ends in spontaneous recovery, and in the proper management of which the best results can only be attained by availing ourselves of the most advanced methods of treatment. Above all things, it is important to make an *early* diagnosis, for the prognosis is good in exact proportion to the stage of the disease at which intelligent treatment is commenced. There need be but very few deaths from empyema, when it exists as a primary affection in non-tubercular subjects, if the diagnosis were always made, and the treatment begun, at an early stage of the malady.

While it is true, as stated in the text-books, that there are no characteristic symptoms by which empyema may be distinguished from serous pleuritis, yet we need never, on that account, fail to make a correct diagnosis before the disease has advanced very far. In the first place, I must express my concurrence with Dr. Flint in the belief that empyema is almost always a primary affection; that it is from the first a suppurative inflammation. I have seen a case in which, after the withdrawal of a serous fluid by means of a trocar and cannula, pus subsequently made its appearance, but it is not impossible that this may have resulted from the introduction of septic germs with the instrument. It is not easy, however, to get the data for a positive judgment upon this question, because the chest is seldom explored with the aspirating or hypodermic needle until several days after the onset of the inflammation, and, if pus is obtained at that time, we can not say positively that it has been present from the first.

But to return to the diagnosis. The symptoms which should lead us to suspect the existence of an empyema are: The occurrence of more than the usual amount of chill or rigors; the existence of a greater degree of pyrexia than is usually observed in serous pleurisy; a red and heavily coated tongue; and greater general depression than is usual in the simpler form. An interesting and important point is, that in empyema *the pulse is apt to be more rapid and show greater arterial disturbance than would be found with an equal amount of effusion from simple acute pleuritis*. This should always attract the attention of the careful observer and lead to a most thorough investigation of the case. Another safeguard against mistakes is found in the general rule that purulent effusions in the pleural cavities do not undergo spontaneous absorption, and that the treatment by diuretics, diaphoretics, and alteratives has no effect upon them. Inasmuch as no effusion should be allowed to remain in the pleural cavity after a fair trial has been made with the usual internal remedies, but should be drawn off mechanically, the nature of the fluid can not long escape detection. But it is always better when the symptoms of constitutional disturbance are more severe than would be expected from the amount of effusion present, supposing that effusion to be serous, to draw off some of the fluid in order to ascertain its nature. It may not at first be a yellow, creamy pus, but, if it is turbid and contains many leucocytes, it is rapidly becoming so. Should it be distinctly purulent, we are then to shape our course accordingly.

The first principle of treatment in this disease is never to allow the pus to remain undisturbed in the chest waiting for it to be absorbed. The chances in favor of that happy event are too meager to justify us in wasting any time on the expectant plan, and the dangers are so great as to positively forbid it. In addition to the evil consequences already referred to, as following the too long retention of a serous accumulation, there are others fully as grave. The most serious of these is the occurrence of perforation of the lung and discharge of the pus through the respiratory passages. It is usually followed by decomposition of the pus remaining in the pleural cavity, or of that subsequently secreted, with increase of hectic fever and prostration. And we can not tell in any case how soon this will take place. It is a complication which reduces the chances of recovery to a minimum.

Spontaneous *direct* perforation of the chest-wall is not in itself an unfavorable event, but the suffering preceding it may be very great. The suppuration of the tissues between the pleura and the air is always attended with considerable pain and distress, and it is inexcusable to allow it to occur if the patient has been seen in time to prevent it. When, however, the spontaneous perforation is *indirect*—that is, when the pus dissects its way to a distinct point before finally coming to the surface—a new complication presents itself. We have then not only to deal with the empyema, but with a suppurating sinus as well.

In one case, which I saw two years or more after perforation had taken place, the pus had burrowed from the right pleural cavity through the anterior mediastinum, and it finally came to the surface below and exterior to the left nipple. It may work its way between the abdominal muscles, and finally discharge even below the level of the umbilicus. But this is not so serious a complication as it would seem at first sight. If an opening is made in a proper position and free drainage established, the sinus will heal spontaneously.

Another very important reason for establishing drainage at an early date is that, when the pus remains for a long time in the cavity, the pleura becomes so altered that the tendency to recovery is diminished. The tendency is rather toward continued suppuration. In addition to this, we should never lose sight of the fact that empyema is an exhausting disease, and that, if the pus is allowed to remain, the patient's strength is sapped and his constitution undermined, so that he will recover more slowly after the establishment of drainage than if it were done at an early date.

It may be advisable to try aspiration at first, repeating it occasionally, if the patient's condition is favorable and the reaccumulation slow. This is occasionally, though rarely, successful. Indeed, even after the fluid has been in the cavity for some time, aspiration may be sufficient. This was exemplified in a case which I saw last summer in the mountains. The sufferer was a young man who, three months before, had had an attack of acute pleurisy from which he had never entirely recovered. He continued to be feverish, his appetite was poor, digestion feeble, and his general aspect was strongly suggestive of the presence of phthisis pulmonalis. A loss of resonance and respiratory sounds in the left axillary and scapular regions, associated with cough and hectic fever, led the attending physician to suspect the presence of pus in the pleural cavity. This view was further strengthened by the fact that the patient had on two or three occasions expectorated large quantities of pus. But, on exploring with the hypodermic needle, no fluid, either serous or purulent, was found. I examined him at the doctor's request, and, by the use of the aspirating needle, withdrew several ounces of pus. I recommended a free incision and drainage. I have since learned that my advice was not followed, but that the young man has recovered entirely and is now fat and strong. As I have not had an opportunity of examining him again, I can not say what the present state of the pleura is; but he seems too well to have any purulent collection in the pleural cavity.

Though such a favorable result is occasionally obtained, it is so rare that it is not worth while to waste much time on tentative measures; but, if there is not a pretty-well-marked improvement after one or two aspirations, it is better to proceed at once to make a free opening and establish drainage. It will sometimes happen that the attempt at aspiration is unsuccessful because the pus is thick, or contains flocculi which occlude the needle or tube and prevent the withdrawal of the fluid. In such a case we may proceed at once to the more radical operation.

Before entering upon the discussion of operative procedures I should like to call your attention to what is known as *pulsating empyema.* It is interesting because the peculiar signs are calculated to deceive the diagnostician. The recital of a case will most easily convey to the minds of those who have not encountered this form of empyema an idea of the peculiar and confusing appearances. In the spring of 1885 a young woman, nineteen years old, was admitted to St. Mary's Hospital. She had been ill for about a year with cough, pain in the left side, occasional chills, high afternoon fever, and night-sweats, and was supposed to be suffering from phthisis pulmonalis. On the day of her admission, as Dr. Harrigan and I passed through the ward, her case was pointed out to us as one of phthisis, and, having some acute cases to attend to, we deferred the examination until the next visit. When we next saw her she was sitting in a chair by an open window, in a cold sweat, gasping for breath, with a pulse of over one hundred and forty, and evidently about to die. We examined her carefully, and found the left side flat upon percussion everywhere below the second rib. An inch below and outside the nipple was a visible and palpable pulsation, resembling the apex-beat of an enlarged heart. The limit of cardiac dullness was, however, two inches to the right of the sternum, and the right auricle could be felt pulsating in the third right intercostal space. The pulsation on the left side might have been the apex of an hypertrophied and dilated heart, or an aneurysm. But, by mapping out a heart on the exterior of the thorax, the base corresponding to the limit of cardiac dullness on the right side and the apex to the pulsating region below and external to the left nipple, it could be seen that it was too large for any heart, particularly in a patient with the history given by the one we were examining. Then, on auscultation, the heart sounds were very weak over the pulsating area. As for aneurysm, the subject was too young, and the situation one in which aneurysms seldom or never reach the surface. The aspirating needle was introduced just outside the pulsating area, and a large quantity of horribly fœtid pus withdrawn. The patient rallied from impending death, and was operated on after a few days. She did well for a short time, but succumbed to exhaustion from the drain of the original disease and of several metastatic abscesses.

By close attention to the physical signs and history no mistake need be made, but it is a condition the occasional existence of which should always be borne in mind, as otherwise we might be misled in our diagnosis.

We have no time to enter upon the consideration of the different operations for the cure of empyema. I will content myself with calling your attention to some points, the observance of which may prevent disaster.

In the first place, if the distension is considerable, say if the pleural cavity is more than half full, we should always, if possible, draw off part of the pus with the aspirator a day or two before the operation, so that there shall not be so large an amount to be evacuated at once. As a result of the pressure of these large accumulations of fluid within the chest, the heart is not only displaced, but the diastole is greatly interfered with. If this pressure is too suddenly removed, the ventricles, losing the support to which they were accustomed, are, as it were, taken unawares, and undergo acute over-distension by rushing in of the blood from the engorged veins. In this way, it is said, fatal syncope may occur. I have never seen a fatal result during an operation, but have seen the pulse falter and run up to one hundred and fifty or one hundred and sixty.

If the pus is thick and can not be aspirated, we should operate in such a way as to avoid the sudden admission of air and rapid escape of the effusion. It is best in such a case to allow half an hour to be consumed in the evacuation of the pus. Another important point is to make the opening in such a way as to secure free drainage. It is not of so much importance whether one or two openings are made if the drainage is good. Cases will sometimes present themselves in which the fluid is anterior to the axillary line and the lung adherent behind. In such a case it would be necessary to make a primary opening into the cavity, and then a secondary one behind, by working through the adhesions. In old cases of empyema it is frequently necessary to divide one or more ribs to admit of contraction of the chest walls. It should be remembered, in these cases, that the lung does not expand to meet the thoracic walls, but the latter sink in to meet the lung. The re-expansion of the lung is secondary.

Original Communications.

OBSERVATIONS ON THE USE OF SOME OF THE
NEWER REMEDIES IN DISEASES OF THE UPPER AIR-PASSAGES.*

By E. L. SHURLY, M. D.,
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There is, perhaps, no department of medical science which has enlisted more interest during the last few years than that of therapeutics, and it ought to awaken in us the strongest feelings of pride and encouragement to see the mist of empiricism which has for so many ages obscured this field gradually dissipating before the light of scientific progress. The results already obtained have been, in great measure, due to the aid which chemistry and physiology have furnished clinical medicine, the former by resolving drugs into their proximate principles, and the latter by pointing out the effects of these upon the tissues and functions of the healthy economy. Now, no department of practical medicine, it seems to me, stands more in need of scientific guidance for its therapeutics than laryngology; for the selection of applications, with few exceptions, depends more upon individual experience and experiment, or empiricism, than scientific principles. Therefore, it would seem that we ought to rigidly study the proximate and remote effects of the application of medicinal agents to the air-passages, and their influence in relation to systemic treatment of various sorts, in the hope of evolving with certainty the hidden facts regarding the relationship between the condition of the part and the absolute effect of the medicament. Pursuant to this line of thought I have, for the past eighteen months or so, been studying the effects of some of the alkaloids and glucosides when used topically. I do not present these observations as conclusive, only with a view of eliciting interest and discussion. I shall omit the general therapy of these drugs, of course, referring to some effects only.

Aconitine.—I have records of twenty-five cases in which it was used either in the form of a spray or pigment. Two were cases of laryngeal phthisis; seven of chronic pharyngitis—in five of which there existed acute exacerbation; eight of acute pharyngo-laryngitis; three of chronic follicular amygdalitis; three of chronic laryngitis; and two of pharyngeal neuralgia. The amount used each time varied from $\frac{1}{480}$ to $\frac{1}{150}$ of a grain. In each instance there occurred in a few minutes the well-known physiological effects of tingling of the tongue and feeling of choking and numbness, to which was superadded, when applied in the nasal fossæ, lacrymation, with sneezing and vertigo. On two occasions these local symptoms were very severe and distressing to witness.

Only once did I observe a marked effect on the pulse immediately after the application. With a small dose —$\frac{1}{480}$ grain—these symptoms passed away in about two hours; with the larger doses from four to six hours elapsed before the patient became comfortable.

As to the local effect, in every case there arose in a very short time, almost immediately, an active hyperæmia. Even in the case of phthisis the pale color was deepened to a vivid rose, or a near approach to it. The ulterior effect was, in the acute cases, to cut short the course of local inflammation; in the cases of chronic pharyngitis, etc., there was no permanent effect, the cases of pharyngeal neuralgia—severe paroxysmal pain on one or other side of the pharynx—occurring in a pregnant woman, and a woman suffering with supposed chronic inflammation of the ovary respectively. The application of the pigment with a brush twice daily produced immediate and marked relief, although not a cure.

From these observations, therefore, I think that this agent as a local application was of little benefit, except in a few particular cases, while its very unpleasant effect upon the sensations of the patient was entirely out of proportion to its therapeutic value.

Agaricin (a glucoside from the *Boletus laricis*).—From the good effects in the abatement of nocturnal sweating, which I have observed from the administration of this agent, I was led to use it topically in a few cases of chronic nasal and pharyngeal disease, but, as I did not observe any physical or therapeutic effect, I have nothing to report at present.

Arbor Vitæ.—On account of its reputed efficacy in causing the disappearance of syphilitic warts, I was led to use this drug as an application to intra-laryngeal papillomata. In one case, that of a boy fourteen years of age, who was suffering with a progressive growth of these tumors on the vocal cords and ventricular bands, it certainly acted remarkably well. Only one of the growths—the largest—was removed by the forceps, the others disappearing under the use of a spray of the aqueous extract, applied once or twice daily, for a period of about three months. Perhaps some of the gentlemen will remember having seen this patient in my office during the time of the last meeting of this association in Detroit; if so, you will remember that we all concluded that, on account of the imminent prospect of suffocation, tracheotomy would soon be necessary. There is not a vestige of a neoplasm in his larynx now. I will add that a renewal of the growths took place in February, but speedily disappeared again under this treatment.

In another case, in an adult, where there were five papillomata in the region of the anterior commissure of the vocal cords, this remedy only partially succeeded, the forceps having been resorted to for the larger ones. The treatment, however, seemed to prevent their renewed growth.

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* Read before the American Laryngological Association at its eighth annual congress.

In still another case, one of cystic tumor of the right vocal cord, the arbor vitæ has had no effect whatever, unless, perhaps, to suppress catarrhal inflammation. Whether this action of the drug is due to any specific property, or simply its astringent property, I do not know. I am aware that there are cases on record of like results following the use of tannic acid, but in my experience I can remember only one case of this kind where the application of tannic acid seemed to take any part in the dissipation of the growth.

I have also used arbor vitæ in the local treatment of some cases of chronic laryngitis with benefit.

In preparing the fluid extract for spray, to render it unirritating, it will be necessary to drive off nearly all the alcohol by means of heat, boiling it down to a syrupy consistence, and afterward add water to the amount of one third to one half of the amount distilled off, then filter.

Ammonium Glycyrrhizate.—As a spray I have obtained no particular effects. I have prescribed it for a large number of cases of acute and chronic bronchial catarrh, in doses ranging between two and five grains. In the chronic cases it seemed inferior to ammonium chloride and ammonium iodide, but in the acute uncomplicated cases it has proved itself a valuable expectorant.

Cannabine Tannate (from *Cannabis indica*).—On account of the difficulty of making a solution of this substance, I have used it mostly in the form of powder mixed with starch, or in the form of an ointment with vaseline. I have used it in about fifty different cases, sixteen of which I have notes of, and a majority of these were cases of nasal or naso-pharyngeal disease. It possesses astringent properties, and is also a decided local stimulant. When applied undiluted to the nasal mucous membrane it causes considerable irritation, which lasts for a period of two to four hours, producing lacrymation and swelling of the turbinated mucous membrane. But when applied diluted with starch in the proportion of two to five grains to the drachm, or with vaseline in like proportion, it has, as a rule, no such irritation, but a decided astringent, and afterward soothing effect. It has proved a valuable agent, according to my experience, as a substitute for tannic acid, which latter I have ceased to use in the nasal chambers on account of its irritating effect; with children suffering from swelling of the nasal mucous membrane, either acute or subacute, it will prove an excellent and efficient application, especially when mixed with vaseline.

Cadmium Sulphate.—This salt, which has been highly extolled as an astringent, I believe is not superior to sulphate or chloride of zinc. I have used it as a spray and pigment in about thirty cases, in the proportion of from one half to five grains to the ounce, and have noted no particularly beneficial result over zinc sulphate and chloride or silver nitrate, excepting in one case where the unpleasant results following the application of any solution of silver nitrate forbade its use. The cadmium certainly acted well, and seemed to bring about the desired result.

Cotoin (the active principle of coto bark).—Although there is not much literature upon this subject, it is reputed to be a good remedy for chronic diarrhœa and the diarrhœa of phthisis. I have administered it in two cases of diarrhœa of phthisis, but without signal success. I have used it locally in about twenty cases of nasal and pharyngeal disease, twelve of which I have notes of. It is a powerful irritant to the nasal and pharyngeal mucous membrane — both healthy and diseased—and leaves no reactionary effect. Its best effects are obtained in cases of atrophic nasal and pharyngeal catarrh, and, when diluted in starch or sugar in the proportion of one part to three or four of excipient, it is, I think, quite equal if not superior to any other application—excepting galvanism.

Coniine Hydrochlorate (a salt of the alkaloid of *Conium maculatum*).—From the well-known selective action of conium on the muscular system and sympathetic nerve, one would suppose that this alkaloid—readily diffusible as it is—would act signally as a corrective in those local disorders of the throat and larynx characterized either by co-ordinate or ordinate spasm, etc.

I have notes of ten cases representing various spasmodic actions of a pathological nature of the pharynx and larynx, one of which was an hysterical laryngeal cough, and one a local chorea, in which I applied this agent repeatedly in progressive doses (both by means of spray and pigment) without any sensible result in modifying the diseased action. I am therefore disposed to regard it as wanting in value for a local medicament.

Cocaine.—As medical literature is already surfeited with items regarding this remarkable drug, I will spare your feelings and pass it by.

Daturine (an alkaloid from *Datura stramonium*).—From the known value of stramonium as an anti-spasmodic, and its especial utility in the relief of spasmodic asthma, I was led to give this alkaloid a thorough trial as a topical remedy in affections of this sort.

I have notes of twenty-three cases subjected to experiment, as follows: 1, bronchial asthma; 1, spasmodic asthma; 2, periodic laryngeal congestion; 3, hay fever; 1, chronic bronchitis (bronchorrhœa); 3, hysterical pharyngeal catarrh; 5, influenza; 1, laryngismus (with ovarian disease); 2, chronic naso-pharyngeal catarrh; 2, acute coryza; 2, chronic laryngitis.

The dose varied from $\frac{1}{100}$ to $\frac{1}{50}$ of a grain, and in some of the cases was repeated two, three, or four times a day; in each case, when the dose was large enough or frequently enough repeated, there appeared to the patient sooner or later the characteristic sensation of dryness of the fauces, etc. The patients with asthma were not sensibly affected by the treatment; two of those with hay fever were very much benefited by the applications if repeated often enough (it was used in the form of spray), but the trouble was not arrested; three of those with influenza were decidedly relieved by three applications daily of a spray ($\frac{1}{100}$ of a grain), while the two others were not at all relieved. The neurotic cases were only relieved by a diminution of secretion, which, however, lasted but a few hours, necessitating a repetition of the dose. In the other cases I could observe no particular effects.

Ethyl Bromide.—This has been used almost entirely as an inhalation for the relief of cough. I have tried it in a large number of cases; it is not quite so efficacious as chloroform, but there is much less general anæsthesia from its continued use, and it leaves no unpleasant after-effects. I think, therefore, that it is deserving of more extended use for the relief of severe dry cough and spasmodic asthma.

Hyoscyine.—The hydrobromate is the salt which has been used. I have been unable to note any marked effect, proximate or remote, from the local use of this salt—excepting in a few cases there arose a sensation of dryness which passed off in about an hour.

It produces no apparent change in the condition of the mucous membrane to which it is applied. The doses used varied from $\frac{1}{400}$ to $\frac{1}{150}$ of a grain.

Hydrastine (alkaloid from *Hydrastis canadensis*).—I have had but a limited experience with this drug, for, seeing no particular effects, and hearing such *bitter* complaints from those to whom I had applied it, I soon abandoned its further employment.

Iodol.—I have used iodol in a few cases of ulceration of the mucous membrane, both specific and ordinary, and observed that it has nothing like the power to arrest the ulcerative process which iodoform possesses, although I can not say but that slow improvement and healing followed its use. It is sincerely to be hoped that this substance will prove to be a capable substitute for iodoform, because it is free from odor and causes no bad taste. I have always applied it by insufflation.

Papain (papaw juice).—In one case of diphtheria I applied the fresh juice, and in six other cases it was used in the form of a glycerole—either one half or two thirds strength; but no solvent action was observed on the exudate in any case. I may add that this was the experience of two other practitioners in our city, who also tried the remedy in cases of diphtheria. Therefore, so far as this limited experience goes, it has utterly failed to sustain its reputation as a remedy for the relief of real diphtheria.

Muscarine Sulphate (alkaloid of *Agaricus muscarius*).—Very little is known about this drug, but it is said to resemble in its physiological action that of physostigmine. I have applied it in doses of from $\frac{1}{50}$ to $\frac{1}{10}$ of a grain in twelve cases characterized by dryness of fauces and larynx, without any result excepting in two. One of these patients presented signs of great dryness of the fauces, and lack of buccal and salivary secretion, accompanying general nervous prostration; and the other had "dry catarrh" of the pharynx and larynx. In both of these cases a spray, repeated three or four times a day, seemed to afford great relief. The immediate effect was a pleasant tingling sensation, soon followed by comfortable heat and more secretion. No effect on the pupil was observed. In the other cases no immediate or remote effects, either objective or subjective, could be observed.

Physostigmine Salicylate.—This was thoroughly tried in a number of instances, of which I have six recorded. In but one instance did it produce any physiological action, or in any obvious way relieve the pathological condition of the parts. This case was that of a delicate young man who had from time to time suffered from spasmodic stricture of the lower pharynx and œsophagus; he experienced almost immediate relief from an application of $\frac{1}{220}$ of a grain, which lasted about six hours, when another application became necessary. At the end of forty-eight hours the attack ceased. Nothing which I had ever used locally in this man's case had acted so well as this agent in cutting short the course of the attacks.

Pilocarpine Hydrochloride.—I have five recorded cases of pharyngeal catarrh characterized by a sensation of dryness and consequent distress in which I have tried this remedy, in doses varying from $\frac{1}{20}$ to $\frac{1}{4}$ of a grain, but without any positive result.

Piscidin (a glucoside from *Piscidia erythrina*).—I have nine cases recorded in which this was used either as spray or pigment, in doses ranging from $\frac{1}{480}$ to $\frac{1}{24}$ of a grain. In only one instance could there be observed any proximate or remote effect, and that was a case of phthisis characterized by a very persistent and aggravated sensation of tickling referred to the pharynx. In this subject the application of a pigment in the proportion of $\frac{1}{120}$ of a grain to the drachm, every two or four hours, seemed to relieve the trouble in two days.

Resorcin.—Although attention was first called to this agent in 1860—when it was presented as a supposed substitute for carbolic acid—yet medical literature does not show that it has been at all extensively used until very recently. I have used it considerably during the past year, and believe it to be an important addition to the pharmacopœia. It is practically odorless and tasteless, while it is soluble in water; it is very feebly caustic, and, although a weak, still an efficient antiseptic. I have the records of thirteen cases in detail in which resorcin was used with good effect. Three were secondary syphilitic ulceration; one, tertiary; six, ozæna—of which one was an aggravated case where the turbinated bones had disappeared; one, eczematous lupus of nose and pharynx; one, ulcerating and eczematous lupus; and one, typical herpetic pharyngitis.

The case of ulcerating lupus needs some additional remarks, inasmuch as it was a peculiar one; the subject, a child nine years old, had been suffering for nine months; first, with an obstruction of the nasal passages and an irritating discharge therefrom, followed gradually by the growth of fungous granulations in these passages and about the edges of the nares and upon the roof of the mouth (about the center of the hard palate). When I saw her in February, 1886, there were extensive ulcerating granulations in the nasal passages and upon the surface of the roof of the mouth as well as at the margins of the nares; the nasal column was also ulcerated and its cartilage denuded. The patient's general condition was also much below par. Having anæsthetized her, I destroyed with the galvano-cautery all the fungous tissue that I could reach and applied iodoform thoroughly. The iodoform was applied for several days, as was also resorcin (in the proportion of one to four and one to six), but the main treatment afterward consisted of resorcin used as a spray or pigment. The galvano-cautery was applied to two small spots in the mouth once since, but otherwise the treatment has consisted of the application of resorcin (and vaseline to moisten the parts) every day, conjoined, of course, with a recuperative and tonic plan of treatment. I saw the patient last on the fifth of this month (May), and observed that she was in good health, with very little deformity about the nose, and no reappearance of the trouble excepting at a spot situated on the inside of the cartilaginous nasal column. She is still under treatment. In the cases of ozæna, especially the one with the loss of the turbinated bones, the effects of this agent, used once or twice daily, as spray, were quite prompt, and it seems to me remarkable. The patient was under treatment about five weeks. I saw him about two weeks ago, and he told me that he was comparatively free from trouble, and had been for the last three months; he uses a douche every day (as might be expected) of salt and water. Has no pain now and no more discomfort than is usual for ever after such a lesion. The ulcerative process is apparently checked.

Sanguinarine Nitrate (a salt of the alkaloid of *Sanguinaria canadensis*).—No special results follow the local use of this drug, but for internal administration in a certain class of cases it is highly useful as a stimulating expectorant. I have noticed no unpleasant effects or depression from it in doses of $\frac{1}{10}$ to $\frac{1}{4}$ of a grain in syrup. I regret that the time allotted to this paper necessitates the omission of many important details connected with the study of these agents, but hope this imperfect and compressed report, as it were, may serve the purpose of inducing some of the gentlemen present to take the subject up for particular clinical study.

I trust that I may be able next year to add something further of interest in this line of work.

DISCUSSION.

Dr. Major.—Having been in the habit of using aconite in the form of spray in the treatment of inflammation of the upper air-passages, I have noticed that the effect of the drug is more marked and more rapid than when used for the bronchial mucous membrane. In one case I was using a solution containing four or five minims in the form of a spray, when the patient became pallid and depressed and presented the usual appearances of aconite poisoning. Although I use it constantly and consider it a specific, especially at the outset, yet I wish to call attention to the increased effect of aconite when it reaches the system by the way of the respiratory passages.

Dr. Mackenzie.—I think the same rule will apply to most drugs when administered by way of the respiratory passages, and therefore would regard the application of powerful drugs like aconite in spray as rather a hazardous procedure. I have made some experiments during the last four or five months with the dioxide of hydrogen in chronic suppurative catarrh of the nose, larynx, and pharynx by internal administration. I commenced its use in old cases which had resisted almost all kinds of treatment, internal and local. The success was such as to warrant me in continuing the trial. I used a four-per-cent. solution. I first commenced with a six-per-cent. solution, but afterward reduced it to four, which keeps better. The usual dose is two or three drachms of the four-per-cent. solution, to be taken three or four times a day, keeping it up for a few weeks. In a fair proportion of cases the discharge was certainly arrested by this means alone. In two cases the result was very marked, and in others the discharge was very much reduced.

Dr. S. Solis-Cohen.—I have been much interested in Dr. Mackenzie's remarks concerning hydrogen dioxide. I have not used it internally in catarrhal cases, but I have seen good results from its administration in phthisis, as originally recommended years ago by Dr. Benjamin Ward Richardson. I usually give a drachm of a ten-per-cent. solution very much diluted. It generally seems to agree with the patient and to improve nutrition. Its use is frequently attended with a notable reduction in the pulse rate, a phenomenon I have not seen mentioned in the text-books or in special articles on this drug. In one case this became so marked that I was obliged to discontinue its use. Further than this, I only noticed the best results in improvement in the general condition; and in cleansing, if I may use the term, the secretions from the larynx, I have used aconite and have seen no bad results from its use. I employ it, however, in the form of the oleate as reported to the association last year, and not as a spray. In this form we are more likely to obtain maximum local effect with minimum constitutional disturbance. I apply it with a brush or a wad of cotton; a two-per-cent. solution in oleic acid. After three years' experience, I can say that it certainly reduces inflammation and subdues pain. In some instances it answers better than cocaine. The effects are more lasting. Some patients complain of its taste, others say it is rather agreeable. Ethyl iodide by inhalation is useful to control fœtid secretions, and may sometimes be used as a substitute for iodoform. It has proved useful in fœtid rhinitis, syphilitic and non-syphilitic. While on my part I would like to recall attention to the advantages of an old method of administering the recent vapor of ammonium chloride, the method of Lewin, in which the patient inhales the vapors arising from the mingling of the vapors of hydrochloric acid and of ammonia, I have seen remarkable effects from its use in old cases of fœtid catarrh. In order to remove the irritating qualities, the vapor should be washed twice; in the second wash-bottle I sometimes place a little terebene or thymol. This makes the vapor rather pleasing, and possibly adds to the therapeutic efficacy. The thymol alone has, however, failed to produce any decided results.

Dr. Morgan.—In regard to aconite and its various preparations, when employed therapeutically in the upper air-passages, my experience had been both extensive and thoroughly satisfactory. For years I have made use of the tincture of aconite-root—in the form of spray, gargarism, pigment, etc.—in treating acute and subacute inflammatory diseases of the nares, pharynx, larynx, and trachea. Aconite, I believe, has a direct and local specific effect upon the respiratory mucous membrane, and, if cautiously and judiciously applied, is invaluable to the laryngologist.

I have long noticed that a spray of tincture of aconite-root, one to one hundred of water, is absorbed by the bronchial mucous membrane with wonderful celerity, and both the local and general effects of the drug become well marked in a few seconds. Aconite, apparently, acts much more rapidly than other drugs when brought in contact with the respiratory membrane. For irritative cough arising from nasal, pharyngeal, laryngeal, tracheal, or even bronchial hyperæmia, a spray of the tincture of aconite-root, ♏ x to f℥ iv of water, is followed by the greatest relief.

I have, however, seen all those physiological phenomena of aconite, so beautifully portrayed by Dr. Shurly, follow the use of the spray, and therefore would recommend circumspection in its use in asthenic patients. I have had a personal and striking experience with an aconite spray, after using the same on myself for an irritative cough, which it always controls. I became weak, my pulse frequent, breathing embarrassed and shallow; there were giddiness, nausea, and constriction of the pharyngeal muscles. Stimulants soon restored me, however.

I also employed the preparations of aconite internally, in small doses frequently administered.

Dr. Shurly.—With regard to the dioxide of hydrogen and the chloride of ammonium, I did not mention them because they are not new. The dioxide of hydrogen was used quite extensively about twenty-five years ago, when it ran about such a course as cocaine is running now. It was especially extolled for the treatment of anæmia, diabetes, etc. It has, I believe, almost lost its reputation, except for some forms of nasal catarrh and wounds.

In reference to the oleate of aconitine, and the oleates generally, I would say that I have not had any reliable results, and therefore have ceased to use them.

In reply to the statement of Dr. Cohen that most remedies act with greater vigor when applied to the respiratory passages, I would say that this is one of the points that I endeavored to bring out in the paper in a negative way, for I do not think that it is generally the case. It is only certain agents which act more quickly or decidedly when applied and absorbed by the mucous membrane of the respiratory tract. Aconite, for instance, certainly acts with greater celerity when applied to the nose and upper air-passages. And this is just the reason why it and other agents having marked effects when so used were not recommended for general use. However, personal preference will greatly influence one in the choice of a given agent.

THE SIMPLEST AND MOST EFFICIENT TREATMENT OF DIPHTHERIA.*

By WILLIAM H. DALY, M. D.,

PITTSBURGH, PA.

I shall not enter into the discussion of the cause, pathology, or clinical history of diphtheria, as the brevity of my paper forbids this; neither shall I hope to bring to your notice either a new plan of treatment or one that will cure anything like 90 to 100 per cent. of your cases of diphtheria; I would that I could do so and thereby claim your gratitude, and, probably, immortalize myself. Neither shall I discuss the identity or non-identity of diphtheria and membranous croup further than to declare that I have known respectable and apparently intelligent practitioners to pronounce cases of diphtheroid, diphtheritic, and croupous sore throat, either one of the three, with so much promiscuity as not only to stagger one's confidence in the practical possibility of nicely discriminating diagnoses, but to encourage the opinion that the method is largely in vogue of basing a diagnosis upon the results—viz., if the patient dies, the case was one of diphtheria or membranous croup; if the patient recovers, then there was little if anything at all the matter other than folliculous amygdalitis, or other unimportant disease.

Neither shall I attempt to open for discussion before this learned body any of the several other very vexed, though always alluring, and important questions that often take the form of pathological conundrums when they are by the identitist and non-identitist in way of argument flouted so scornfully at one another.

But I shall have the pleasure of drawing your attention to what in my hands has been not only the simplest, but the most efficient treatment of diphtheria. I refer to the calomel treatment. You say, "Oh! that is not new; I have resorted to the calomel treatment for several years." Then, I answer, I am glad to hear you say so, and pray that this brief article may serve at least to renew your faith in it, and thus aid in saving the lives of more children, precious to their parents.

Touching the question of how new or how old this plan of treatment is, I found some time ago, when reading an old non-medical book,* a memoir of that learned philosopher, divine, and wit, the Rev. Sidney Smith, who was also, we may recollect, an educated physician, the following, which not only gives the respectability of age to this plan of treatment, but the crowning happiness of having been in more remote times successful. This note refers to a period about the years 1797 to 1799, at least eighty-six years ago; it runs thus: "A few months after the birth of Sidney Smith's daughter he went in the summer for a short time to Burnt Island, a small sea-bathing place at no great distance from Edinburgh, for the recovery of his wife's health; and here, but for his courage and firmness, he would have lost his long-wished-for daughter in a way he had not at all anticipated. When only six months old she fell ill of *croup* with such fearful violence that it defied all the remedies employed by the best medical men there. The danger increased with every hour. Dr. Hamilton, then one of the most eminent medical men in Edinburgh, was sent for, could not come, but said: 'Persevere in giving two grains of calomel every hour; I never knew it to fail.' It was given for eleven hours; the child grew worse and worse; the medical man in attendance then said: 'I dare give no more; I can do no more; the child must die; but at this age I would not venture to give more to my own child.' 'You,' said Sidney Smith, 'can do no more; Dr. Hamilton says to us: "Persevere"; I will take the responsibility; I will give it to her myself.'" He gave it and the child was saved.

Dr. Hamilton, of Edinburgh, a man of solid and courageous convictions, is seconded by a medical attendant of neither courage nor strength of moral character, but the father, a man whose life and character were strong and high above all foolish prejudice of any kind upon any subject, says: "I will take the responsibility, I will give it," and saves his child.

I salute your memory, Dr. Hamilton, with the utmost reverence for that courage that makes a man positive about that which he has tried and knows to be reliable, and I here place you on record before an association of some of the most learned men of your profession specially interested in the study of means to stay destruction of life from a disease the character of which you understood and knew how to treat so ably and successfully in remote times in medical history.

You will note that this case was treated by calomel, pure and simple; and that with two-grain doses every hour to a child six months old. You will also note that the case was called *croup*, and that we are not going to discuss the vexed question of the identity or non-identity of diphtheria and croup in this paper, or following it; and that the foregoing quotation is merely made with a view of recording gratefully the name and honor of Dr. Hamilton and the remote date of the calomel treatment. It will not do to fall back upon the sophistry that diphtheria was not known then, and that a case of croup could be better differentiated then than now, or that the case of Sidney Smith's child was one of croup and not diphtheria. The success of the treatment is sufficient proof to me that the case was one of diphtheria.

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* Read before the American Laryngological Association at its eighth annual congress.

* "A Memoir of the Rev. Sidney Smith," edited by Mrs. Austin, vol. i. Harper Bros., 1855, p. 63.

Now, briefly, as to the credit for the practice of the calomel treatment of diphtheria in modern medicine. To Dr. William C. Reiter, of Pittsburgh, a gentleman who was learned in other sciences as well as in medicine, this credit is due. He was the apostle of this plan of treatment of diphtheria, and he for many years persistently practiced the treatment, and promulgated the doctrine to his brethren, many of whom were at first unbelievers; he was an earnest and honest observer, fearless in the practice and assertion of what he deemed right. He had large experience and ripe judgment, and, as he stood for many years almost alone in the advocacy of the plan, he deserves still more our respectful praise and free acknowledgment.

In medical works the various mercurial plans of treatment are mentioned without, so far as I have observed, according to Dr. Reiter the credit of having advocated and practiced the method of treating diphtheria by the exhibition of calomel. I regard all the other mercurial preparations as mere excuses or substitutes for this best of all mercurials in diphtheria—viz., calomel. To any one caring to see the brochure of Dr. Reiter, which is little known of, and is so peculiar in its style as to entitle it to be considered an oddity in medical literature, I will say that it was published by J. B. Lippincott & Co., in 1878, and is entitled "A Monograph on the Treatment of Diphtheria based upon a New Ætiology and Pathology," by William C. Reiter, A. M., M. D.

As to the ætiology and pathology as enunciated by Dr. Reiter, I suppose one is at liberty to object or differ without being subject to the suspicion of being unorthodox; but as to the treatment, I can truly say from substantial experience it is simple, and it is what is all-important to us—it is efficient.

Now, what is the method clinically? We will say, to a child three or four years old, suffering from diphtheria (early recognition and opportunity are, as a matter of course, of the utmost importance with this as with any other plan), give of pure, untriturated or unmixed with sugar, calomel, in two- to five-grain doses, every one, two, or three hours, either dry on the tongue and washed down with a little ice-water, or, as Dr. Reiter preferred it, given floated on a little ice-water in a teaspoon. This is repeated at intervals until free catharsis follows; the stools are to be carefully observed, and, when they assume the appearance of having floating in them gelatinous masses of dark, rather brightish-green bile, giving them an appearance resembling chopped spinach, or the water-polyps seen in watering troughs, then the intervals of the dose can be lengthened so as to keep up this condition of catharsis to the extent of one to three stools each day. It is not well to diminish the dose, but simply to lengthen the interval, as there is less liability by this means to produce ptyalism. This is an important point and ought to be remembered. It has been a matter of much surprise to me that there is little depression caused by the exhibition of these large and frequently repeated doses of calomel in diphtheria, and that ptyalism is so infrequent, especially so if the careful observation is made to keep up catharsis, or rather that fluid condition of the contents of the alimentary canal where the osmotic action is toward them from the blood-vessels, and not *vice versa.* Under this condition of treatment the membrane exfoliates and reforms, if at all, with less and less readiness; the fever abates; the prostration is slowly replaced by brightness and a disposition to activity, which latter should, of course, be prohibited lest heart paralysis or syncope should suddenly supervene and cause a suddenly fatal termination to the otherwise favorably progressing case.

Dr. Reiter was in the habit of alternating his doses of calomel with large doses of chlorate of potassium. This I have not found necessary, but I have adhered to the calomel in large and frequently repeated doses, with rather light but nutritious fluid diet, and have found it the most efficient of any treatment; and withal so simple for the nurse and so merciful to the patient. The latter is no small factor in the method when we compare the dreadful struggles of the little sufferer at the sight of the commonly used—shall I not say *abusively used*—throat-brush and bottle, and all the other impedimenta of the more elaborate treatment to this simpler one of getting the child to open its mouth to drop a powder in, followed by a readily accepted spoonful of ice-water. There is needed no argument to show which is the most desirable practically; and I can assure you, my fellows, that this needs but a faithful trial to show you the greater efficiency of this over all other plans of treatment in results.

But there are some rules which I beg you will follow faithfully. These are: (1) Give calomel in its purity; (2) give it in large doses; (3) give it frequently; (4) give it until you have the free and characteristic catharsis; (5) give light nutritious diet; (6) give little or no other medicine.

If these simple rules are followed and common sense is allowed to take the place of common prejudice, you will save more of your diphtheria patients by this than by any other method known to modern medicine.

DISCUSSION.

Dr. Shurly.—I have listened to the paper with much interest. I wish that I could be as positive as the author is. I have had considerable experience with all forms of diphtheria—having been a general practitioner for about fifteen years—and am also familiar with the use of calomel in the treatment of such cases. I quite agree with the speaker that calomel is very efficient in the treatment of croupous inflammation; but, when he says that it is the most efficacious agent for the treatment of diphtheria, I can not agree with him. The difference between croupous inflammation and diphtheria is very great, as we are all aware; and, while the conditions of the blood- and lymph-vessels which attend so-called croup are often promptly and efficiently relieved by calomel, it is not the case with diphtheria, which is a *specific* croupous inflammation, according to my experience, and I may say this accords with that of all of my professional colleagues with whom I have talked upon the subject. I do not believe, then, that any positive reliance can be placed upon the use of calomel in the treatment of *ordinarily severe cases* of diphtheria. At the same time, I reiterate that I think calomel one of the most useful general remedies for controlling ordinary croupous inflammation.

Dr. FRANK DONALDSON.—It is very refreshing to hear a paper like that just read in these days of skepticism in therapeutics, and to see the confidence of so eminent a physician as Dr. Daly in one remedy, and not only in one remedy, but in one preparation of that remedy. But I must express much disappointment that he did not give us illustrative cases. I have seen diphtheria treated time after time with calomel without success. I therefore can not agree with Dr. Daly as to its value. I can not see that it has any specific effect. If any mercurial is to be used in diphtheria, a better form would be the corrosive chloride, which is the best topical application we have for it to-day. This is used in solution of a strength suited to the case (ordinarily 1–1,000). Nourishing food, with alcoholic stimulants, should be given at short intervals. The patient ought to be kept in a well-ventilated room with an open fireplace, and all articles removed from the room which could carry or intensify infection. We should treat the diseased patient, and not the disease alone.

Dr. S. JOHNSTON.—My attention has lately been called to the use of trypsin in solution as an application to the diphtheritic deposit, and I have used it in one case of croupous amygdalitis with good effect. In this case the uvula was immensely swollen and œdematous, the glands at the angle of the jaw were enlarged, and the tonsils covered with a tenacious pseudo-membranous deposit. The usual treatment with brandy, tincture of iron, and good food, together with the use of thymol, carbolic acid, and lime-water, was used, but without effect upon the deposit. I then applied trypsin; six applications were made in twelve hours, when the membrane had entirely separated. There was some oozing of blood from the tonsils as the membrane came off. The patient made a rapid convalescence. I think that this agent promises to be of great use in the future in removing pseudo-membranous deposits.

Dr. BEVERLEY ROBINSON.—I do not suppose that there is a single remedy that has not been used by some man as a specific agent in diphtheria. I wish to express my entire confidence in Dr. Donaldson's statement; calomel is an old remedy, it has been used by many practitioners, and has been given up because it was not found effective. I should regret to admit that calomel was the only remedy in the treatment of diphtheria. Experience shows that remedies act differently; they are sometimes efficient and sometimes not, and unaccountably so. The disease itself varies at different times and in different cases; I have never seen in New York such types of the disease as I have seen in Europe. The cases of malignant diphtheria which can be seen at any time during the winter in the Children's Hospital in Paris are very rarely met with in New York.

I was called to a case two years ago which had been given up by a general practitioner; everything had been tried but bichloride of mercury, which I used in accordance with the instructions of a prominent New York practitioner, who recommended its use strongly, but the patient promptly died. No good effect was noticed.

Still, I believe in the specific treatment of diphtheria, and naturally in my own specific (cubebs). There is no clinical evidence sufficient to warrant the idea that calomel is a specific against diphtheria. A general consensus of opinion as to the line of treatment to be pursued seems to indicate: disinfect the throat and air-passages by sprays and topical applications; give internally iron and chlorate of potassium, and maintain the powers of the system by stimulants and food; the experience of most observers has shown this to be the most reliable plan of treatment; no other should be generally substituted for it without the most careful investigation.

Dr. BOSWORTH.—I am glad that Dr. Daly has brought this subject before us for discussion. I believe that calomel does have something of a specific effect in diphtheria. I also believe that there is often a mistake in the diagnosis. Diphtheria is a blood poison which often kills by its toxic effects, but oftener kills by the development of croup. In the latter case the diphtheria does not kill directly, but by setting up the secondary affection of croup. Mercury has no effect upon the diphtheria, but it has a very decided effect upon croup; therefore a mercurial is the remedy to administer, because the croup is the fatal element. Diphtheria is a poison, like scarlet fever, which shows itself in the throat, its probable point of entrance into the body. The local affection in the larynx, however, is croup, and not diphtheria.

Dr. MACKENZIE.—I am surprised that no one has spoken of the use of alcohol in this disease. I will not enter into the discussion of the pathology of diphtheria or question its identity or non identity with croup. I would, however, call attention to the fact that, of all remedies which have been used in the treatment of the disease called diphtheria, alcohol is the sheet-anchor.

Dr. DALY.—I did not expect that the method of treatment upheld in my paper would be received with much favor by this body. It did not receive much credit from me at the beginning, but if you will try it you will think better of it. From the tenor of the discussion, I can only conclude that some of those who have entered into it were not listening to the paper when it was read. Therein I distinctly said that I had not a *new* method of treatment to offer, and I did not say that calomel was a specific. I am not a believer in specifics. What I did say was that I had obtained better results in the treatment of diphtheria from calomel than from any other remedy or remedies. That was all; and I now wish to reiterate this statement, and I desire it to be taken for all that it is worth, for, after five or six years' experience with the calomel treatment, I come before you and say that it has given me better satisfaction than all of the other known methods of treatment together, and, until I can find something still better, I propose to continue its use. My friends in Pittsburgh have also used it, so that my opinion is based upon experience with sixty to eighty cases, either directly or indirectly. After trying all the other methods of treatment, with their heavy mortality, I turned to calomel in despair, but, after using it in some severe cases (and it so happened that these were in pauper children living in alleys and under very unfavorable conditions), I was surprised to find that they got well. I therefore propose to stick to the bridge which carries me safely over, and shall continue the calomel treatment of diphtheria until I find something better. I expected that the sentiment of this learned body would condemn the treatment; but pray let me say to you, if you will lay aside prejudice and try it, you will be pleased with the results. And I make rather free to say that I suspect that even those who have spoken most adversely in this discussion of the method recommended, will nevertheless try it quietly, and, if they do, they will save their patients' lives more certainly than by any other means known to modern medicine. But I earnestly beg them, when they do essay a trial of the method, not to jeopardize its efficacy in any sense by ignoring the brief rules I have laid down, but *give calomel pure and simple, and no other medicine whatever.*

A CLINICAL REPORT OF CASES TREATED BY PNEUMATIC DIFFERENTIATION.*

By HERBERT F. WILLIAMS, M.D.

It is with a full appreciation of the danger of becoming wearisome that I feel compelled to give somewhat in detail my further clinical experience with the pneumatic cabinet. Such suggestions as I shall deem proper will appear with the report of each case, the history and study of which may be said to have prompted them. For the establishment of any new device or procedure in the healing art, practical investigators are willing to accept the drudgery of compiling clinical results, for in this manner only can practical conclusions be reached which must establish the utility of the matter in question. It is with satisfaction that I have received from prominent men who have had the opportunity to examine many of the cases that form the basis of my first report assurances that my diagnoses were correct and my conclusions honest and not overdrawn.

In my original report in the "Medical Record" for January 17, 1885, results were recorded which have been termed "brilliant" by some enthusiastic believers in the differential process. Some careful men have feared that the application to five advanced cases of phthisis of the term "recovery" might have created a feeling of incredulity concerning both the description and the describer, and endangered or delayed the development of this process. Had the continued application of this process by myself and others failed to corroborate those results, I feel that the uncommon precaution of having my diagnoses and results in those cases confirmed by competent observers, together with the moderate statements that are found in the closing paragraphs, would have saved me from the righteous oblivion that is meted out to willful misrepresentation or unpardonable incompetency and rashness. There seems to be no common understanding or agreement as to what constitutes a recovery in advanced phthisis, but the necessity for such a term sinks into insignificance when objective results are fully recorded. My determination to adopt these measures of confirmation was greatly strengthened by the reading of a paper by Dr. Sidney A. Fox, of Brooklyn, before the Kings County Medical Society, entitled "A History of Sixty-nine Cases treated by Pneumatic Differentiation," where in many instances I had the opportunity to examine his cases before and after treatment.

In Case I of my first report (acute catarrhal phthisis, stage of softening) the patient has been in good health up to February 1st of this year; weight 126 pounds. The last of January she attended a funeral on a cold and blustering day, and during the journey to the place of interment kept her feet warm by means of a heated foot-stove; was sufficiently imprudent to leave the carriage and stand by the grave during the recital of the burial service. A violent cold was contracted for which she did not seek relief until the latter part of February, and then on account of a hæmorrhage which occurred in the night, induced by great violence in coughing.

The inheritance of phthisis in some is an inheritance of carelessness and indifference. Though this patient had a phthisical mother, she is the personification of carelessness, whether inherited or acquired. She again commenced treatment March 15th; her weight had declined to 115 pounds; high evening fever, constant cough, and profuse expectoration which contained bacilli. Her physical signs gave evidence of acute phthisical degeneration. She took eight treatments, but the journey from her home in Brooklyn to my office in New York seemed to exhaust her, in consequence of which she was placed under the charge of Dr. Fox and Dr. Brown, of Brooklyn, from whom she is now taking treatment; but her progress is slow, and there are grave doubts of arresting the phthisical process.

On September 5, 1883, this young lady was considered to be in a hopeless condition by five careful physicians who then examined her. At this date her treatment by pneumatic differentiation began, and as a result she has had over two years of immunity.

Case II.—(Phthisis, third stage.) Patient remains in good health; has had one or two colds this winter and coughed a little in consequence; has received no further treatment.

Case IV.—(Abscess of left lung, producing extreme exhaustion, with primary changes taking place in right lung) Patient in the same condition as last reported; well, with exception of slight fistula in side.

Case V.—(Acute bronchial catarrh with sub-epithelial abscess and peri-bronchial inflammation.) Patient was at last accounts driving an ice-cart about the city. He has had one severe hæmorrhage since last report, from which he fully recovered without serious lung change taking place.

The seven patients with primary infiltration are well with the exception of two. Mr. F., whose family history is phthisical, remained well until June, 1885, a period of about eighteen months, when he was seized with a severe hæmorrhage after prolonged exposure to the hot baths of Salt Lake City He returned to me for treatment in October, 1885, remaining a month, and is now living in Rondout in good condition. Mr. M., the other, whose case was No. 3 of my original report, has been depressed by business disappointment and increased domestic responsibilities. He has taken seasons of pneumatic treatment under the care of Dr. De Watteville, of New York, who reports him at present in an improved condition, though he notes a steady decline from year to year. From June 12, 1885, up to the present time, I have treated forty-five additional cases of pulmonary disease by this process.

Of these cases I will give as concise a report as possible consistently with the particular phase that each represents, and the hints for treatment that each suggests.

Case I.—M. B., bachelor, gentleman, a high liver, aged sixty-one; best weight 140, present weight 105; expansion one inch; no history of phthisis; in delicate health for two years. Pain in left scapular region; slight exertion produces great distress for breath. Has traveled extensively in search of health. Expectorates profusely and coughs incessantly.

Physical examination shows respiratory movement in left side restricted; emaciated, flatness of clavicular spaces; percussion shows high pitch in left side, most marked in upper portions, but resonance defective throughout. Auscultation shows feeble respiratory sounds on right side. Left side broncho-vesicular, cog-wheel; prolonged expiration; deep-seated râles.

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* Read before the American Climatological Association at its third annual meeting.

Received nine treatments (iodine in spray), covering a period of one month, at the end of which time his expansion had increased to one inch and five eighths; cough relieved, expectoration easy and less; walks about with comfort; weight increased. Started for Denver, where in three weeks his weight had increased to 120 pounds. This case shows the benefit that follows a thorough expansion and the more marked improvement that follows climatic influence in consequence of increased respiratory power. This patient is in a fair condition to-day, though incapable of recovery.

CASE II.—(Referred by Professor A. L. Loomis.) Mr. L., aged forty-four, married; best weight 125, present weight 110; family history clear; dyspeptic for several years; asthma for twelve years, slight at first but increasing in severity every fall, when he has had attacks of acute bronchitis. One year ago had pneumonia with slow and imperfect resolution; can not lie down at night, sleeps poorly, no appetite.

Physical examination shows increased resonance in both lungs, with exception of scapular region of right, where it extends to the axillary region; there is high-pitched percussion; increased area of cardiac dullness. On auscultation, the respiratory sounds are not so strong as the percussion note would indicate. The inspiratory act of right lung is attended with fine crepitation, which is superficial. There are mucous and dry râles interspersed through both lungs. Treatment began June 22d and continued at first tri-weekly, then once a week. He now appears occasionally; spent the fall and winter in complete comfort; his asthma is greatly relieved; his crepitation gone; a spray of chloride of ammonium with tincture of stramonium was generally used; his weight to-day is 118¼, within 5¾ pounds of normal; has taken in all forty-seven applications with an average rarefaction of $\frac{6}{10}$ inch. At times he is simply allowed to inspire, at others to complete the act into the outside atmosphere.

CASE III.—(Referred by Professor Henry I. Bowditch, of Boston.) *June 23, 1885.*—Mrs. C., aged forty, married; grandfather died of quick consumption; best weight 115, present 91. Evening temperature 100°; expansion 1¼ inch; in good health until two years ago, when she had pneumonia from which she has never recovered. She has a hacking cough which prevents continued conversation; since January slight exertion provokes coughing; she can not go up or down stairs with ease; complains of great pain in left lung; expectorating freely; estimates quantity at one half cupful daily; appetite poor; menstruation scant.

Physical examination shows emaciation and extremely feeble respiratory movements. The percussion note is normal in right lung; the left shows dullness in subclavicular region near clavicle; the note is of varying character in different regions of this lung, but there is a general absence of normal resonance. Auscultation shows a fair vesicular murmur in right lung, but the left is irregularly broken down, gurgles being easily demonstrated in the clavicular space; there are no respiratory sounds in the lower lobe. This patient took daily treatment covering a period of five weeks, taking in all thirty-two treatments; rarefaction increased from three tenths to eight tenths, and occupying from fifteen to twenty minutes daily. Iodine and mercuric bichloride were used in spray; marked amelioration in cough, and diminished expectoration; increased ability in walking; reads aloud with comfort; expansion increased one half inch; weight, ninety-six pounds. Physical examination shows increased circulation of air in the left lung, including the lower lobe, though the upper portion remains the same as before, with the exception of diminished quantity of gurgles; this patient was last seen since January 1, 1886, when she professed a continued improvement, though no examination was made.

CASE IV.—Mr. P. This gentleman I knew personally for ten years, having been his family attendant during this time. On July 15th he appeared at my office and complained of symptoms which pointed to an enteric disturbance, which the warm season for several years has produced. For three years in succession he has suffered from dysenteric symptoms that have confined him to bed from two to three weeks. To forestall this, I instructed him to go home and to bed, where I attended him for several days. He complained of little pain in his left side; his temperature was 102° every afternoon, and resisted my best efforts at reduction. We had succeeded in preventing his diarrhœal trouble, but his continued fever and growing weakness demanded a further examination, which was made July 25th. He never complained of a cough, and there was literally nothing but the slight pain in his left side to point to the disclosures of his left lung, which I found to give evidence of consolidation. Regarding this as suspicious of a low grade of pneumonia, or rapid and general tubercular infiltration, I made arrangements to give him the benefit of the pneumatic treatment, which were completed July 30th, at which time his condition was as follows: Mr. P., aged forty-two, married, machinist, best weight 150, present 136, temperature 101°, expansion one inch—all on right side. Father and two sisters died of phthisis; pale, anæmic, and emaciated; respiratory movement of left side confined to a heaving movement of scapular region; no movement in the lower left thorax; the percussion note showed good resonance in the superior portion of the left lung, extending to the third rib; the mammary portion and posteriorly, from the spine of the scapula, it was of high pitch and short duration; right side showed increased resonance; auscultation gives normal vesicular murmur in superior portion of the left lung, front and back; breathing bronchial over lower portion of the scapular region. The sounds are indistinct below this point.

He was submitted to treatment, using one-to-five-hundred mercuric bichloride in spray, and at his first application breathed easily against six tenths rarefaction, the major part of his breathing being done with his right lung. Auscultation showed no evidence of deeper penetration of air, and no diminution in the bronchial breathing. Auscultation while breathing in the cabinet revealed a perceptible change in the character of the sounds, which were, at least, broncho-vesicular. The following day examination immediately before treatment revealed bronchia, breathing. Immediately after, the breathing for one or two respirations was broncho-vesicular, but rapidly changed to bronchial during auscultation. It should not have required this demonstration to clear up my original diagnosis; the left thorax was demonstrated to be at least half full of pleuritic effusion. The increased expansion of the lung by the normal air caused an even distribution of the effused fluid in the thorax, and the respiration became vesicular. Upon leaving the cabinet, the lung was quickly pressed up against the superior thorax, partly by its own contractility, but principally by the gravitation of the effused fluid. Now the respiration became bronchial. Ninety-six ounces of serum were withdrawn by aspiration, requiring three operations at intervals of forty-eight hours.

In two weeks from this time patient again commenced treatment. After ten applications there was an even expansion of the lungs. There still remained a deficient percussion note in the lower left axillary region. In October he resumed his work, having gained nearly his normal weight and strength. On December 25th he was seized with a chill while sitting near an open door. On December 30th a general pleurisy of the right lung was detected, for which he was actively treated. This attack was characterized by violent symptoms, and resisted every endeavor to control fever and conserve his strength. Forty-grain doses of quinine would reduce his temperature from 105° to normal, but only temporarily. January 28, 1886, his respiratory sounds became coarse and harsh; cough had never been a prominent symptom, and he had scarcely any expectoration. Bacilli were now for the first time detected; he was made to abandon all hope of being able to resume cabinet treatment. February 5th his condition was hopeless; but, as a last resort, ten minims of cultivating fluid, containing the sixth and seventh generations of *Bacterium termo*, were subcutaneously injected, the injection being repeated twice at intervals of six hours. A diffused redness about the points of puncture was the only disturbance noticeable.

This procedure was justified by the absolutely hopeless condition of the patient, the certainty of an autopsy, and the hope that the latter might yield some further light upon the questions of bacteria therapy now exciting interest in foreign biological laboratories.

On February 8th he died. On the 9th an autopsy was made by Dr. A. H. P. Leuf. The right pleura was covered with plastic lymph, with recent adhesions. The superior lobe was infiltrated with miliary tubercles; the left lung was attached at its lower border by old adhesions and a thickened pleural sac containing about two ounces of fluid. The left apex contained tubercles, but less profuse than the right. No effusion in right thorax. Microscopic examination of lung shows enormous quantities of *B. termo*, but no apparent diminution of the specific bacilli. This case is given in detail for two reasons: First, it demonstrates the necessity of not allowing our preconceived conclusions to persist when careful physical exploration discloses their fallacy. Second, a pleurisy with such a history points to a tubercular dyscrasia, which a prompt and thorough disinfection arrested. This is proved by the comparative freedom from tubercular infiltration of the left lung, which five months previous had been the seat of an inflammatory action similar to the subsequent attack on the right lung, where efficient disinfection could not be employed by reason of patient's inability to get to the cabinet.

Case V.—(Referred by Dr. Woodside, of Williamstown, Mass.) Miss A. D., aged twenty-four, unmarried, best weight 117, present 107, expansion two inches, immediate family history clear, paternal uncles and aunts died in early life. Sick since August, 1884; early cough and hoarseness; hemorrhage in November of same year, which was not controlled for a week. Sent South in January, 1885; remained four months, with improvement, which was maintained up to the latter part of August, when she caught a fresh cold, which has aggravated her symptoms. To-day, September, 1885, her condition is as follows: Appetite poor; coughing, especially at night and morning; expectorating yellow matter; shortness of breath; pale and anæmic; chest thin and emaciated; lack of normal motion left side; fremitus most marked right side. Percussion note high pitch; in outer clavicular angle of left side, over right apex, front and back, the note is high pitched. On auscultation, both lungs in front the respiratory sounds are harsh; fine crepitation accompanies the first half of the inspiratory act; outer right pectoral region there is a prolonged expiratory murmur on both sides; left side scapular region, respiration is broncho-vesicular, coughing producing fine crepitation in right clavicular space.

This patient received thirteen treatments, with an average rarefaction of six tenths of an inch, using the mercuric bichloride in spray alternately with a solution of iodine. She was allowed to reside in Bloomfield, N. J., taking the train to New York, a distance of fourteen miles. There was no improvement, excepting in expansion and a slight diminution in expectoration; her weight decreased two pounds, and, under the above circumstances, further treatment was considered of doubtful value. On her return to Williamstown, Dr. Woodside noted a deeper and freer penetration of air. This case is reported to show the necessity of making proper arrangements as to access to the cabinet before commencing treatment.

Case VI.—Mrs. B., aged thirty-five, best weight 135, present 122; expansion one inch and three quarters; one brother died of hasty consumption, aged thirty-five; trouble began in spring of 1885, with cough, rapid emaciation, and night-sweats; was sent to the Catskills by her physician in June; remained eight weeks. The month of September was spent in Morristown, N. J. Physical examination October 25, 1885. Sallow, anæmic, evident emaciation, feeble respiratory movements; can not go up or down stairs or walk fast; fever at night; expectoration profuse, but heavy and difficult to raise; cough very troublesome; menses scant and irregular. Percussion, right side, normal; left, there is cracked-pot resonance, in middle of infra-clavicular space. Auscultation, right side, sounds are harsh, cog-wheel, with prolonged expiratory murmur; left, cavernous breathing in middle apex, with gurgles; the excavation extends to third intercostal space. This case has been under treatment up to March 31st of this year, taking in all forty applications with an average rarefaction of eight tenths of an inch, with sittings of from fifteen to twenty minutes; the treatment was sometimes supplemented by the method of artificial respiration (*i. e.*, placing the valves at D and vibrating the air from plus to minus the weight of the normal atmosphere). The mercuric bichloride was used for the first fourteen applications, afterward tr. iodine, five-per-cent. solution; her weight has increased to 133 pounds—within two of her best previous weight; no retraction has taken place in the left side; she has periods of coughing and expectoration, and small gurgles are still detected in cavity, which is reduced in size and becoming irregular.

It is too early to predict a recovery in this case. Yet, in the light of past experience, continued treatment should, I believe, produce ultimate quiescence of her symptoms. In justice to the cabinet, it may be noted that this patient has taken no other treatment except occasional prescriptions for relief of incidental symptoms not directly pulmonary.

Case VII.—In this case I will give an exact transcript of my examination notes. October 7th, Mrs. A. G. F., married, housekeeper, aged thirty-two, mother of three children. Best weight 138 pounds, present weight 122½; pulse 112; temperature, 2.30 p. m., 101°, expansion one inch. Family history: Mother died of uterine trouble; father living. Personal history: Two years ago commenced with hacking cough; night-sweats; has been to many physicians, Dr. Leaming succeeding in abating the symptoms; last summer, after taking cold and attention to sick child, the trouble started afresh. At the present time has pain in left side, coughing, "raising phlegm" with difficulty; night-sweats, chilly toward evening; can not go up stairs; no appetite and dyspeptic; constipated; menses irregular and scant; phlegm greenish; cough so violent that vomiting is produced. Inspection shows large full eye, with blue sclerotics; anæmic; flesh flabby; emaciated, with clavicular depressions; tongue red; respiration 26 per minute, feeble respiratory movements. Palpation apparently normal on right side; left absent.

Percussion.—Lack of normal resonance in both supra-clavicular spaces. There seems to be no abnormality excepting in the subscapular, axillary, and submammary regions of the left side; here the note is high pitched; the point of greatest flatness is at the junction of the axillary and subscapular regions.

Auscultation.—The inspiratory murmur in both infra-clavicular spaces is harsh and wavy. Deep inspiration produces annoying cough; in the supra-clavicular spaces there is broncho-vesicular respiration; there are moist râles on the left side in the subscapular and axillary regions. Treatment began October 7, 1885, and continued until December 19th, taking nineteen applications. Bichloride of mercury was alternated with iodine. From six to eight tenths rarefaction was maintained for fifteen minutes at each sitting; for the last six applications artificial respiration was used. On December 19th every symptom had abated. All her functions normal; weight 128 pounds. March 11, 1886, has caught a fresh cold and returns for treatment. Her improvement since December 19th has been phenomenal; she now weighs 154½ pounds; has remained in the city all winter in perfect health; thinks herself in the third month of pregnancy.

On April 28, 1886, I called on Dr. Leaming with reference to this patient. He authorizes the statement that, when he last examined her in July, 1885, he found an extensive inter-pleural plastic exudate of the left lung, and that the diseased process had extended into the lung tissue.

Case VIII.—Miss M., aged twenty-five, unmarried; best weight 120; present 101; father died of phthisis and Bright's disease, aged fifty-eight; mother, of phthisis, aged thirty-nine. Has been sick two years with the usual symptoms of progressive phthisis; has been taking cod-liver oil, hypophosphites, and general tonic treatment. She is now coughing and expectorating, has evening fever, emaciation, marked clavicular and intercostal depressions. Percussion shows high-pitched note in outer subclavicular space of right lung; over left apex, extending to the second intercostal space, the note is high pitched. Auscultation shows broncho-vesicular respiration in the right apex. Left apex near sternum gives irregular respiration with gurgles and surrounding bronchial respiration. Microscopic examination shows bacilli. Treatment began October 31, 1885, and has continued up to April 19, 1886, coming every day for first ten applications, then thrice weekly. At present once a week. The stronger antiseptics were used. She has maintained her weight during the winter, and now weighs 103 pounds. The auscultatory sounds show sonorous râles and rhonchi, but the former evidence of small cavities is wanting. Her sputum shows absence of bacilli for the last two examinations, covering a period of four weeks. Enormous quantities of bacteria that can not be distinguished from *B. termo* are found.

Case IX.—(Referred to me by Dr. Mary Putnam Jacobi, November 6, 1885.) G. P. S., aged thirty-nine; one sister and one paternal aunt died of phthisis; has been under Dr. Jacobi's care for some time, using, with other treatment, the compressed-air method of Waldenburg. The necessity for this was a severe congestion of the right lung in February, 1885, which confined patient to the house for three weeks. Dr. Jacobi's notes of the physical examination are as follows:

"Right lung superiorly, relative percussion dullness from clavicle to third rib, ordinary respiration feeble; in forced respiration, inspiration is suddenly checked at close, then weak sound during expiration, not like tubular breathing, but suggesting the forced expansion of an adherent pleura. Posteriorly, supraspinous space, inner half, ordinary respiration gives wavy inspiration; forced respiration gives soft tubular expiration. Outer half, soft pleural crackling, which extends down to outer half of the scapular region, encroaching a little on the axillary space, heard distinctly at ordinary respiration, more at forced respiration; heart is normal, though pulse easily 87. There is sugar intermittently in the urine; patient was a week ago in the midst of an acute bronchial catarrh, from which undoubtedly your treatment should give relief, whatever may be done for the chronic pleurisy." The treatment was begun November 10th, and was continued uninterruptedly tri-weekly until December 10th; rarefaction was the force employed, and six to eight tenths the amount maintained for fifteen to twenty minutes. Tr. iodine, five-per-cent. solution, diluted with extract of pine needles, and glycerin sprayed.

My notes of this case show a rapid improvement of the symptoms, which are further confirmed by a note from Dr. Jacobi dated December 7, 1885: "I find the patient much improved. The bronchitic attacks really seem entirely cured, and more air enters the upper part of the lungs under the clavicle. I still find the traces of the chronic pleurisy, and indeed should not expect that to disappear." On February 2, 1885, Dr. Jacobi writes as follows: "The patient you treated for me, I think, in November, 1885, and who rapidly improved under the use of the cabinet and spray, seems now entirely well. Has been living in the country; has used the Waldenburg at home to continue the effect of compressed air, and a respirator in the city to avoid the irritation of the city dust; has had no cough since, and I find to-day that the pleural crackling has about disappeared. Has resolved, in case of a fresh attack of either bronchitis or pleurisy, to return to you at once, and this I have advised."

Case X.—(Case referred by Dr. Fowler, of New York, Dr. Loomis concurring.) Mr. W. S., clerk, aged twenty-eight; best weight 150, present 124¾; pulse 110, temperature 101°, expansion one inch. Early mortality in seven paternal and five maternal aunts and uncles, but no satisfactory evidence of phthisis Three years since was ill with pleurisy, left lung; one year ago pleurisy right lung.

March 20, 1885.—Had croupous pneumonia, right lung; this has never resolved, now coughing and raising; hectic; no appetite, extremely weak, progressive emaciation, respiratory movement extremely feeble, nil on right side, fremitus increased right side. Percussion over middle and lower lobe of right lung extremely high-pitched (flat); careful percussion in clavicular spaces fails to give a full normal note. Auscultation shows on right side a loss of vesicular element in clavicular spaces; respiratory acts are short, and, the lower down we listen, the less distinct they become. The inspiration is faintly bronchial and attended with fine crepitation over the lower posterior border and axillary space; left shows sibilant râles in upper lobe.

Treatment began November 12, 1885, with two tenths rarefaction, but, on account of the great weakness of the patient, it became necessary to use the artificial respiration; by the 18th he was able to maintain a rarefaction of six tenths, inhaling a solution of ammonium chloride, glycerin, and carbolic acid; afterward the tincture of iodine and pine-needle mixture was used; he averaged four to five treatments a week, and up to December 30th had taken twenty-five applications; his examination now shows a freer expansion of his right lung, and the bronchial respiration had become more pronounced; his expansion had increased to two inches and a half, and there was some diminution in the number of moist râles in the right lung; his weight declined two pounds, but he was stronger and took a walk of three quarters of a mile on January 1, 1886; his improvement was temporary, however, for he was confined to his room for the month of January. In February he commenced treatment again, taking nine treatments, but no improvement followed; his sputum had shown at all times bacilli in enormous numbers.

Case XI.—Dr. J. D., of New York, has kindly sent me a report of his own case, which I submit verbatim:

"Age twenty-seven; physician; father and two cousins on paternal side died of phthisis. Healthy until July, 1880, when I suffered from pneumonia, being at that time in a run-down condition due to over-work. Pneumonia was very slow in resolving; during fall and winter of 1880 had three attacks of hæmoptysis; by spring of 1881 all symptoms of lung disease had disappeared, and until the early part of 1884 I was entirely free from pulmonary troubles. At this time I contracted a cold, and the cough persisted in spite of treatment. During the following winter I had two very slight attacks of hæmoptysis; chest was examined at this time, and gave evidence of catarrh of smaller bronchi; spent February and March at Hamilton, Bermuda, but did not derive the expected benefit which I sought, and suffered from the enervating effects of the climate. During August and September, 1885, sojourned in the White Mountains and gained but a few pounds in weight; returned home somewhat discouraged; having heard a paper on the treatment of phthisis by pneumatic differentiation, read by Dr. H. F. Williams at the meeting of the American Climatological Association, I determined to try the method. In October, 1885, I called on Dr. Williams, who kindly put the apparatus at my disposal. At the time of commencing treatment a physical examination showed some catarrh of the finer tubes; a small area of diminished respiration at the upper portion of the left lung. I coughed all day; cough accompanied with expectoration.

"For the first few weeks used the cabinet three times a week, and later once a week. After the first few *séances* the cough diminished, and in three months had stopped entirely. In a month from beginning treatment had gained five pounds in weight.

"Preliminary and subsequent examination was made by Dr. J. H. Ripley, of New York. Latter examination shows nothing but small area of diminished respiration and slight emphysema. The latter condition was noticed before this treatment was commenced.

"Very truly, J. D."

The doctor omitted to state that for his emphysema he was subjected to two inches pressure in the cabinet and expired into the normal air, from which he frequently experienced relief and benefit.

(*To be concluded.*)

PEROXIDE OF HYDROGEN AS A THERAPEUTIC AGENT IN DISEASES OF THE EYE.

By J. HERBERT CLAIBORNE, Jr., M. D.,
NEW YORK.

Recently much has been written in regard to the use of the peroxide of hydrogen in cases of purulent middle-ear inflammation.

Bearing in mind its bleaching properties and presuming that the benefit alleged for it in such cases was due to these properties, it occurred to me that, in the form of a weak solution, it might be of advantage in catarrhal inflammation of the conjunctiva.

Experimentation was made in a number of cases with quite uniform results, which are appended below.

On the instillation of two drops of a ten-per-cent. solution into the conjunctival sac in chronic catarrh, the following was observed:

The patient invariably started as the drops fell into the eye; that portion of the conjunctiva which was bathed in the drops became blanched and presented a "washed-out" appearance in from half a minute to one minute after instillation; this condition lasted at least five minutes; immediately after introduction the bulbar conjunctival vessels became constricted; this condition yielded to marked distension in a few minutes; bubbles rose to the surface of the fluid, and some remained clinging to the bottom and sides of the sac; twenty to twenty-five minutes after the instillation the eyes presented an irritated appearance, the bulbar vessels remaining still distended and the palpebral conjunctiva equally as red as if not redder than before.

The patients complained irregularly of stinging immediately after the introduction, which lasted on an average from one minute to a minute and a quarter. Twenty to twenty-five minutes after the first instillation they invariably stated that their eyes felt better and more comfortable.

In acute cases the same was observed, save that the bulbar vessels became immediately distended after the instillation without apparently becoming smaller in half an hour. No exact difference can be drawn between the effect of a ten- and a five-per-cent. solution, nor between these and a one-per-cent. solution, save that with the latter the stinging is less and usually lasts only half a minute.

Instillations were made also directly upon the cornea; there was no change in its appearance; the stinging was no greater, and no local anæsthesia occurred under half an hour's observation; there was no effect upon the pupil. The instillations were made every third day at the clinic.

The patients were instructed to use no other form of treatment; they invariably returned with the eyes in a less inflamed condition.

Encouraged by the ultimate result, I was bold enough to prescribe a five-per-cent. solution for one patient with acute follicular conjunctivitis, and to direct him to put two drops into each eye morning and night. He returned on the third day with the eyes much worse. He complained of severe stinging on the introduction of the drops, which, however, soon passed away.

The bulbar vessels were intensely congested and did not yield entirely to several drops of a four-per-cent. solution of cocaine.

In the light of the foregoing observations, I do not feel justified in advising the use of the peroxide of hydrogen in eye diseases, and, although no alarming reaction followed its use in any case, I gladly relegate to others its employment in the eye.

130 Lexington Avenue.

Nitrous Oxide as an Anæsthetic.—Mr. G. Q. Colton has lately written a pamphlet in which he says:

"There are, no doubt, many dentists who manufacture impure gas, or administer pure gas after it becomes stale. There is this important fact to be considered: There is no injury produced by the inhalation of stale gas, only it fails to produce the effect desired. And, if the gas is so impure that its inhalation would prove fatal, *it can not be breathed at all*—it would be coughed up at once. When the gas is pure it has no more taste or odor than the common air, and is perfectly agreeable to the lungs. I suppose that, in showing patients how I wish them to commence to breathe the gas, I inhale, in the aggregate, twenty gallons myself every day. *There is no reaction following the inhalation of the gas.* In this respect it is unlike all other stimulants. And this simply because it acts on the blood, and not on the substance of the lungs or other organs. Consumptive patients will often feel stronger for days after inhaling it, because it supplies to the blood that element—oxygen—for the lack of which they are growing weaker and weaker. The good effects, however, are only temporary."

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THE DISASTER AT CHARLESTON.

SUCH a calamity as has overtaken the fair city of Charleston is likely to involve certain consequences that call for consideration from a medical point of view. Some of them are chiefly of interest in a theoretical way, but most of them are of intense and many of them of urgent import to the people of the afflicted town. But they are not all necessarily of a gloomy nature. It does not seem irrational to entertain the expectation that some good will be found to have resulted from the earthquake in individual instances. It goes without saying that the emotional strain under which the people of Charleston have been trying to bear up ever since the catastrophe took place must have had a very pronounced depressing effect, especially among the blacks. In many cases it has doubtless turned the scale in the fatal direction with invalids, and it has probably brought on premature labor, with all its attendant perils heightened by the abnormal situation, in the case of many a poor woman. Emotional excitement, however, especially in the form of sudden and intense shock, is occasionally not only not injurious but positively beneficial, as is well known to alienists. Certain forms of insanity sometimes yield entirely and somewhat suddenly to a profound mental or emotional impression. Especially is this observed in cases of mental derangement of puerperal origin, after the acute maniacal stage has given way to a lingering melancholia. We may entertain the hope, then, that something of this sort may have happened to light up the gloom that has settled on Charleston; indeed, the statement is already current that a lady of that city who for many years had been afflicted with aphonia suddenly recovered the power of speech under the terror inspired by the earthquake. That case, to be sure, was not of the character that we have specially alluded to, but, considered as a neurosis—and it seems reasonable to so consider it—its sudden termination may be looked upon as strengthening the hope we have expressed.

The immediate necessities of the sick and injured in Charleston are undoubtedly receiving all the attention at the hands of the local physicians that is possible under the circumstances, and we may be allowed to express the hope that, amid the pressing need of food and shelter, the peculiar needs of the sick will not be overlooked by those who have charge of the work of applying the contributions of money which, it is gratifying to observe, are being sent in from various parts of the country. But it is not alone the present requirements of the sick and wounded that call for consideration. The people of Charleston are practically in the plight of an army that some unfortunate turn of affairs has forced to evacuate a well-ordered camp and take refuge in a locality presenting no other advantage than that of safety for the moment, without supplies, without adequate means of communication, disheartened, and panic-stricken. They are even worse off than this, for, instead of a trained collection of men disciplined with a view to such contingencies, they are made up of human beings of all sorts and conditions—men, women, and children, white and black, the sick and the aged as well as the able-bodied. Nobody can say how long they may be obliged to remain in this distressing state, but it is very evident that even now they have been living long enough under these disadvantages to make the question of the sanitation of the streets and squares in which they are encamped one that must be attended to at once if pestilence is not to follow in the wake of present hardship and peril. It calls for all the forethought and providence that humanity is capable of to look out for a contingency more or less remote while at the same time a hand-to-hand struggle has to be kept up with imminent danger, but we believe that the medical men of Charleston will show themselves equal to the occasion, and we trust that the measures they may urge upon their fellow-citizens will be made to appear in their true importance. We hope, too, that the pecuniary aid which it is now the privilege as well as the duty of the rest of the country to contribute will be found sufficient to provide for carrying out proper sanitary precautions besides furnishing food and shelter for the time being.

THE SURGERY OF SWALLOWED FORKS.

AT a recent meeting of the Paris *Académie de médecine* M. Polaillon showed a plated iron fork, about seven inches long and weighing nearly two ounces, which he had removed the day before from a juggler's stomach, where it had lain for sixteen days, having been swallowed accidentally during a deep inspiration taken while the man was rehearsing the trick of making the fork disappear in the pharynx and œsophagus and yet keeping the tips of the tines within his grasp. The fork caused only a little uneasiness at the pit of the stomach, and the man's digestion went on normally. According to the account given in the "Gazette hebdomadaire de médecine et de chirurgie," the patient declared that he felt it very distinctly at the upper part of the stomach, and that he was perfectly aware of the direction in which it was lying. It was impossible, however, for M. Polaillon to feel it on palpation, although the abdominal wall was not fat enough to prove an obstacle, and the passage of an œsophageal bougie bearing a metallic olive connected with a resonator, as well as that of a bougie having the two poles of a battery at its extremity, gave no appreciable evidence of the presence of the fork.

It was then that M. Trouvé bethought himself of using a magnetic needle of exceeding delicacy, mounted as in a mariner's compass. When this contrivance was brought close to the patient, the needle pointed at once to the region of the stomach, and it followed the man's movements. In like manner, an electro-magnet, placed at the distance of a few millimetres from the abdominal wall, caused a sudden bulging of the skin whenever the current was passed. As doubt was no longer possible, M. Polaillon decided to remove the foreign body by means of gastrotomy. The stomach was opened without having been previously stitched to the abdominal wall, the fork was readily removed, and up to the time of the meeting the patient had done very well.

M. Polaillon added that the service rendered by the electro-magnet in determining the presence of the fork had led M. Trouvé to think that perhaps the instrument could be made use of in extracting iron objects from the stomach by the natural channel. Inasmuch as we now had electro-magnets capable of lifting a weight of from nine to eleven or twelve pounds avoirdupois, possibly such a force might be conducted to the extremity of an œsophageal bougie, which, being placed in contact with the foreign body, would fix it and allow of its withdrawal. This view was not shared by M. Le Roy de Méricourt, who suggested that, even if the foreign body could be seized, the contraction of the cardiac orifice would oppose a resistance much greater than the force available for the extraction. To this objection M. Polaillon replied that the stomach might be previously distended with liquid or with gas, and M. Goubaux remarked that in horses he had many times observed that distension of the stomach under such circumstances allowed of overcoming the contraction of the cardiac orifice, especially after a number of trials. Incidentally M. Larrey alluded to a case of extraction of a fork from a young girl's stomach, and to another case of the removal of a fork that had advanced into the intestine of an adult; in both instances gastrotomy was performed, and recovery took place. Finally, M. Polaillon stated that there were now seventeen cases of swallowed forks on record, in seven of which the presence of the foreign body had been so well borne that it was got rid of by the formation of an abscess.

ITEMS, ETC.

Infectious Diseases in New York.—We are indebted to the Sanitary Bureau of the Fourth Division of the Health Department for the following statement of cases and deaths reported during the two weeks ending September 7, 1886:

DISEASES.	Week ending Aug. 31.		Week ending Sept. 7.	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever	29	13	22	8
Scarlet fever	9	1	6	3
Cerebro-spinal meningitis	3	3	2	2
Measles	27	5	20	2
Diphtheria	39	21	35	13
Yellow fever	0	0	1	1

The Yellow Fever in Mississippi.—It has been reported to the Louisiana board of health that the yellow fever has disappeared from Biloxi, Miss., and to-day the board will relax its quarantine in case no new cases of the disease are reported.

Harvard University.—It is announced that Dr. Oliver Wendell Holmes will read a poem on the occasion of the celebration of the two hundred and fiftieth anniversary of the university, which is to be held on the 6th, 7th, and 8th of November.

E. W. S., Philadelphia.—In the white race, seven inches.

Army Intelligence.—*Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from August 29, 1886, to September 4, 1886:*

MIDDLETON, P., Major and Surgeon. Assigned to duty at St. Francis Barracks, St. Augustine, Fla., as post surgeon. S. O. 126, Division of the Atlantic, September 2, 1886.

CRAMPTON, L. W., Captain and Assistant Surgeon. Relieved from further duty at Bellevue Rifle Range, and granted leave of absence for one month, to take effect before rejoining his proper station (Fort Bridger, Wyoming). S. O. 108, Department of the Platte, August 28, 1886.

LAGARDE, L. A., Captain and Assistant Surgeon. Upon departure of Third Infantry from Fort Ellis, Montana Territory, to proceed to Camp Sheridan, Mammoth Hot Springs, Wyoming Territory, and report to the commanding officer for duty, relieving Assistant Surgeon Pilcher. S. O. 87, Department of Dakota, August 27, 1886.

PILCHER, JAMES E., First Lieutenant and Assistant Surgeon. When relieved by Assistant Surgeon LaGarde from duty at Camp Sheridan, to return to his proper station (Fort Custer, Montana Territory). S. O. 87, Department of Dakota, August 27, 1886.

WOOD, L., First Lieutenant and Assistant Surgeon (recently appointed). Ordered to report by letter to the commanding general of the Department of Arizona for assignment to duty. S. O. 202, A. G. O., August 31, 1886.

MASON, CHARLES F., First Lieutenant and Assistant Surgeon. Relieved from duty in Department of the East and assigned to duty in Department of Arizona. S. O. 203, A. G. O., September 1, 1886.

WALKER, FREEMAN V., First Lieutenant and Assistant Surgeon (recently appointed). To report in person to the commanding general, Department of the East, for assignment to duty. S. O. 203, c. s., A. G. O.

Naval Intelligence.—*Official List of Changes in the Medical Corps of the United States Navy for the week ending September 8, 1886.*

DICKSON, S. H., Passed Assistant Surgeon. Detached from the Naval Academy, October 1, 1886, and ordered to Navy-Yard, Washington.

LIPPINCOTT, J. G., Passed Assistant Surgeon. Ordered to Naval Academy, October 1st.

SHIPPEN, E., Medical Director. Detached from Naval Hospital, Philadelphia, and ordered to attend officers of the Navy and Marine Corps at Philadelphia not otherwise provided with medical aid.

HORD, WILLIAM T., Medical Director. Detached from Examining and Retiring Boards at Washington, October 5th, and ordered to Naval Hospital, Philadelphia, Pa.

DEAN, R. C., Medical Director. Ordered to duty as member of Examining and Retiring Boards at Washington, October 5, 1886.

BRANSFORD, J. F., Surgeon. Detached from U. S. Steamer Iroquois, and ordered to Naval Hospital, New York.

HALL, C. H. H., Passed Assistant Surgeon. Detached from Naval Hospital, New York, and ordered to Naval Hospital, Yokohama, per steamer of 21st inst.

Society Meetings for the Coming Week:

MONDAY, *September 13th:* New York Ophthalmological Society (private); New York Medico-historical Society (private); New York Academy of Medicine (Section in Surgery); Boston Society for Medical Improvement; Gynæcological Society of Boston; Burlington, Vt., Medical and Surgical Club; Norwalk, Conn., Medical Society (private).

TUESDAY, *September 14th:* New York Medical Union (private); Medical Societies of the Counties of Chemung (Elmira) and

Rensselaer, N. Y.; Newark and Trenton, N. J., Medical Associations (private).

Wednesday, *September 15th:* Harlem Medical Association of the City of New York; Northwestern Medical and Surgical Society of New York (private); Medical Society of the County of Allegany (quarterly), N. Y.; New Jersey Academy of Medicine (Newark); Philadelphia County Medical Society (clinico-pathological).

Thursday, *September 16th:* New York Academy of Medicine; New Bedford, Mass., Society for Medical Improvement (private).

Friday, *September 17th:* Chicago Gynæcological Society.

Saturday, *September 18th:* Clinical Society of the New York Post-graduate Medical School and Hospital.

Obituaries.

Thomas Alexander McBride, M. D.—When the steamship Aller reached this port last Monday it was learned that Dr. McBride, who had taken passage on her, died on the 31st of August, and that his remains had been consigned to the sea. Although not more than forty years old, Dr. McBride had for several years been out of health, and had frequently had attacks of acute illness. The cause of the trouble proved to be kidney disease, and on that account the deceased spent a great portion of the past summer under treatment at Carlsbad. As he was a man of fine physical development, the early fatal termination of his disease adds the element of surprise to the regret felt by those who knew him. He was a native of Ohio, but he obtained his medical education in New York, having taken his degree from the College of Physicians and Surgeons in the year 1871, and had ever since been in practice here. After his graduation he served on the house staff of Bellevue Hospital, and after that he was for several years the house physician of the New York Dispensary, of which institution he afterward became a trustee. At the time of his death he was one of the physicians of the Presbyterian Hospital, and a member of the Medical Society of the County of New York, of the Academy of Medicine, of the Laryngological Society, of the Neurological Society, and of the Practitioners' Society.

At the outset of his professional career Dr. McBride gave evidence of capabilities and attainments that seemed to assure his success as a physician, and that evidence was sustained by his subsequent progress. He was a general practitioner, but he made neurology a special study, and he was one of the editors and founders of a very meritorious quarterly journal devoted to that branch of medicine, the publication of which was discontinued not long ago. Of late he had displayed great activity in the investigation of renal affections, to the special study of which his mind was perhaps turned by his knowledge of the nature of his own disease. He was an acute diagnostician and a fertile therapeutist. Almost from the start he found himself busily occupied with private practice; but this did not prevent him from giving a large part of his time to clinical teaching. From time to time, also, he read important papers before various medical societies, and contributed valuable articles to the journals. Toward the close of his life his practice was largely that of a consulting physician, and in that capacity he was highly esteemed by his fellow-practitioners. Although his intellectual gifts were amply sufficient to account for his success in life, his genial and amiable qualities had their effect in leading to a prosperity seldom seen in a man of his comparative youth. He will be sorely missed by a wide circle in the profession.

OBITUARY NOTES.

Charles Dudley Homans, M. D., of Boston, died at Mount Desert, Me., on Wednesday of last week, aged sixty years. His death is stated to have been due to disease contracted at a hospital operation two years ago. The deceased belonged to a family many of whose members have risen to distinction as medical practitioners. He received his degree in medicine from Harvard University in 1849, and continued to practice medicine in Boston up to a short time before his death. He was one of the surgeons of the City Hospital, and a member of the Massachusetts Medical Society (of which he was at one time president), the Society of the Cincinnati, the Massachusetts Humane Society, the Massachusetts Medical Benevolent Society, the Suffolk District Medical Society, the Boston Medical Association, the Boston Society for Medical Improvement, and the Obstetrical Society of Boston (of which he was the first vice-president). His membership in the Society of the Cincinnati was by virtue of his grandfather's having served as a surgeon in the Army of the Revolution.

Albert H. Crosby, M. D., of Concord, N. H., died suddenly of apoplexy last Sunday, at the age of sixty. He was a son of the late Professor Dixi Crosby, of the medical department of Dartmouth College. The deceased received his medical degree from the same institution, after having been a member of the bar for several years. During the war of the rebellion Dr. Crosby served in various capacities in the medical corps of the volunteer army, and he was afterward a pension bureau examiner, physician to the New Hampshire State prison, and physician to St. Paul's School at Concord. He stood high as a practitioner, and was much esteemed as a citizen.

Letters to the Editor.

A CRITICISM ON CRITICISM.

945 Broadway, *September 7, 1886.*

To the Editor of the New York Medical Journal:

Sir: In number 31 of the "Centralblatt für Chirurgie," Dr. Roser and Dr. König refer to the German translation of Sayre's "Lecture on Orthopædic Surgery" in terms of uncharitable criticism; and they make a short-range target of the author's agnosticism on the subject of tuberculosis of the bones and joints. They decide that, according to their best judgment, the practical points which are found in Sayre's work are not sufficient to make up for the pathological deficiencies.

This is one of those interesting demonstrations of patriotism which we so often see among really great men, who are so filled with pride at their own successes that no mental room is left for anything of a different color from another country.

The names of Roser, König, and Sayre are known wherever civilization has extended, and their reputations have not been founded upon mistakes either. The studies of König in tuberculosis of the bones and joints are of inestimable value to the world; but, at the same time, the Germans who are gazing with upturned faces into the pathological skies have passed heedlessly the practical mechanical genius of Sayre, which has done more for that unimportant object—the patient—than studies in bacillology have done for him (the tuberculous patient).

The Germans were discouraged and driven away from mechanical apparatus to a great extent when they learned that tuberculosis was their antagonist in fungous disease of the joints. The Americans, on the other hand, were slow to believe that the enemy was the tubercle bacillus, *for the reason that* they were defeating him with such comparative ease.

In this country a case of humpback (tuberculous spondylitis) is rarely seen, because our mechanical treatment is so effective; but along the streets of Berlin the cases are as common as frogs along a June trout-brook.

While German surgeons are discussing the question as to whether the wound after hip-joint excision should heal by granulation or by primary union, many of our orthopædists here will say that they have never yet been obliged to excise a hip joint. Patients with tuberculosis of the knee joint whom Sayre would send out into the country to run about and play—wearing a light extension apparatus—are in Germany laid up on the hospital shelves to ripen for excision.

It is true that tuberculous disease of the bones and joints is far more common in Europe than it is in America, but the ravages of the disease are none the less extensive in untreated cases here. At the present time we are actively engaged in studying tuberculosis from a pathological standpoint, and the result is that we have come to believe that under many circumstances tuberculosis is a self-limiting disease.

I presume that, as a matter of fact, consumption of the lungs could be pretty regularly recovered from if the lungs could be put entirely at rest during the early stages of the disease. Even partial rest would probably help matters a great deal; and if the patient with recent tuberculosis of the lungs could have a plaster-of-Paris jacket firmly applied about the chest; if he could refrain from speaking, or from using his voice in any way for a year; and if he could rest at ease in a suitable atmosphere, and live upon a diet of rich milk and fruits—his chances for complete recovery would be more than fair.

Roser and König are justified in criticising Sayre's work, as far as the question of tuberculous disease is concerned; but, when they say that the practical points are not sufficient to make up for the pathological deficiencies, they are most decidedly mistaken.

Students must, of course, depend upon the Germans for profound researches in pathology, but I speak advisedly when I say that Germany is by no means in a position to criticise Sayre's practical treatment of tuberculous disease of the joints.

Robert T. Morris.

Proceedings of Societies.

OBSTETRICAL SOCIETY OF PHILADELPHIA.

Meeting of September 2, 1886.

The President, Dr. B. F. Baer, in the Chair.

Intubation of the Larynx.—Dr. E. E. Montgomery showed a set of Dr. O'Dwyer's tubes, together with the gag and the instruments for inserting and removing the tubes, and related the history of a case of laryngeal diphtheria in which they had been used successfully to avert asphyxia. In consequence of an overdose of stimulant, the tube had been coughed out and had had to be replaced, as the child could not breathe without it. The speaker contrasted the difficulties of tracheotomy with the comparative ease of intubation, and called attention to the lack of success attending the former operation, due to parents not giving their consent to it early. He had done eleven tracheotomies before having a single successful one, whereas his first case of intubation had been successful; so that he felt decidedly in favor of the new operation.

Oophorectomy.—Dr. M. Price related the history of a case of interstitial uterine fibroid. The uterus was of about the size seen in the third month of pregnancy, irregular in outline, nodular, and bound to the pelvis. The ovaries were displaced backward and incarcerated between the uterus and the sacrum, making it difficult to remove them. The woman had been suffering for four years, and for the last year had been a confirmed invalid, unable to do any work. For more than a year her marital relations had been suspended, owing to a sickening pain that attended any attempt at coitus, and she had had to walk with great care, and lie on her stomach while resting or sleeping, to prevent a throbbing and sickening pain in the pelvis. A rather exceptional feature of the case was the absence of profuse and irregular bleeding. The patient's menstrual flow had been irregular, scanty, and pale; her chief suffering from engorgement of the ovaries and pressure on them. All kinds of treatment had been tried perseveringly during the last three years, but the patient had grown worse, so that she preferred the risk of death to longer suffering. The ovaries were removed on the 9th of July. They were enlarged, were situated low behind the uterus, and contained numerous pus-pockets. The Fallopian tubes were enlarged, but did not contain pus. Except for a suture abscess, the patient had done perfectly well after the operation, and was now free from pelvic pain or soreness, and able to attend to her domestic affairs. The uterus had not been examined since the operation.

AMERICAN DERMATOLOGICAL ASSOCIATION.

(Concluded from page 276.)

Clinical Observations regarding the Value of Resorcin, Ichthyol, and Lanolin in Cutaneous Diseases.—Dr. H. W. Stelwagon, of Philadelphia, read a paper with this title.

Trophoneurosis of the Skin caused by Injury of the Median Nerve.—Dr. G. H. Tilden, of Boston, reported the case of E. F., fifty-five years of age, who had been wounded in the wrist by a circular saw four months before coming under observation. Three or four days after the infliction of the injury there was loss of the tactile sense with a feeling of numbness in the last two phalanges of the fore and middle fingers. This had continued and steadily increased. Three weeks after the accident a bulla had appeared upon the terminal phalanx of the middle finger. Similar lesions had developed from time to time upon the last two phalanges of the fore and middle fingers. The bullæ had appeared every two or three weeks and had not been accompanied by any subjective sensation. Six weeks' treatment with the faradaic current had caused decided improvement in all the symptoms. During this period only one bulla had formed. He had then stopped treatment and returned to work. Three weeks later all the former symptoms had suddenly returned. The patient had since disappeared.

The treatment of these cases consisted in the use of electricity and the application of blisters over the seat of injury. A last resource was to cut down upon the affected nerve and endeavor to relieve any constriction or pressure upon the nerve which might be found. If no such condition was detected, resection of a portion of the nerve might be advisable, since complete section was not apt to be followed by spontaneous trophic changes, and since it had been found by some observers that resection of a portion of the affected nerve was sometimes followed by the arrest of the trophic changes.

Native Plants Injurious to the Skin.—Dr. James C. White, of Boston, read a paper with this title. He enumerated over fifty species of plants which had irritating properties when brought in contact with the skin.

Notes on Drugs was the title of a paper by Dr. H. G. Piffard, of New York, in which he referred briefly to several preparations recently introduced.

A Few Additional Notes on Psoriasis.—Dr. Greenough read a paper which was supplementary to one that had been presented at the last annual meeting of the association, being a continuation of the tabulation of cases of psoriasis that had been seen during the past year. The facts previously noted with reference to age, sex, the time of the first appearance of the disease, and the number of cases, had been confirmed. The speaker had found that, as a rule, patients with psoriasis were above par in general health and strength. He considered this latter fact as a strong argument against the possible connection between psoriasis and syphilis. He had never seen psoriasis of the hands unassociated with evidences of the disease in other parts of the body.

Chondroma of the Upper Lip.—Dr. Robinson related the history of a case in which the tumor had occupied the right side of the upper lip of a man thirty-six years of age. It had been growing for two years. The mucous and cutaneous structures were freely movable over the tumor, which was sharply limited, somewhat encapsulated, and nourished by a small artery entering at the base. Microscopical examination showed the tumor to consist of embryonic, gland, and connective tissue. The affection was considered to be very rare. It had been described by Paget, under the name of labial glandular tumors.

Keratosis Follicularis associated with Fissuring of the Tongue and Leukoplakia Buccalis.—Dr. P. A. Morrow, of New York, related the history of the case of a sailor, aged twenty-one years, who came under observation in December, 1885. The entire surface of the body, with the exception of the face, palms, and soles, was found to be the seat of follicular disorder. The ducts of the sebaceous glands were occupied by comedo-like bodies, projecting sometimes from a quarter to half an inch above the surface. The comedones, when pressed out, were hard and dry. There was no evidence of irritative or suppurative action. They were not accompanied with itching. The tongue was large and rough to the touch; the surface was deeply fissured, the fissures extending to the submucous tissue. The buccal mucous membrane presented a bluish-white appearance, thickened and raised in places, forming distinct plaques, which were superficially fissured. The absence of irritation or marked sensitiveness of the fissured organ was quite noticeable. Examination seemed to exclude the possibilty of a syphilitic origin. The speaker objected to the term ichthyosis, since that suggested a disease of a different nature. He selected the term keratosis follicularis as more correctly expressing the pathological condition present, as well as indicating the anatomical seat of the disorder. Drawings representing the microscopical appearances of the lesions were presented.

A Clinical Study of Scleroderma.—Dr. Graham related the histories of two cases of this rare disease, and referred to the following points: (1) That the disease was found principally in temperate climates, and occurred in seasons when there were sudden changes of the weather; (2) that it was more closely related to rheumatism than had been supposed; (3) that, although morphœa had in all probability a similar pathological origin to scleroderma, yet the clinical distinctions were so marked that at present it was expedient to treat it under a different name.

Carcinoma Cutis.—Dr. Le Grand N. Denslow, of St. Paul, related the history of a case occurring in a patient forty-nine years of age. The skin of the right chest was covered with a nodular new growth, which presented no ulceration. Around the nipple the nodular mass, for an area of six square inches, reached a thickness of one inch. The older portions of the growth were covered with thickened epidermis. There was slight enlargement of the axillary glands. The different nodules were not movable beneath the skin, but the whole mass was free from the fascia. The duration of the growth was seven months. The patient died four months after coming under observation.

At the autopsy many small solid nodules were found in the left lung. In the mesentery there was a nodule one inch and a half long and half an inch in diameter. The microscopic examination of these masses showed that connective tissue preponderated in them all. The growth on the skin occupied the papillæ and the deeper portions of the corium.

Dr. Atkinson said that these cases are exceedingly malignant. In a case of his own, which had presented appearances similar to that of Dr. Denslow's case, the disease had run its course in two or three months. They were so malignant that it would seem no operative procedure was justifiable.

Dr. Taylor said that he might allude to two cases that had for a time been looked upon as cases of cancer of the nipple, both in men. They had eventually turned out to be cases of hard chancre; but in one case the induration was so great that carcinoma was strongly suspected.

Scarlet Fever and Scarlatiniform Eruptions following Injuries and Operations.—A paper on this subject was read by Dr. Atkinson, who first reviewed the literature of the subject referring to the cases on record. In many of these cases it was held that the affection had been a true scarlatina. In other cases the scarlatiniform rash was of septic origin. Various drugs which were frequently prescribed in traumatic cases would produce such eruptions, special reference being made to the cinchona alkaloids. The eruptions produced by these drugs were usually of an urticarial appearance, but they might be of a scarlatiniform nature.

Dr. Morrow said that the speaker had not mentioned the rash that often followed the use of antipyrine, which frequently simulated scarlatina. Again, carbolic acid and iodoform dressings would often produce rashes presenting the objective appearances of scarlet fever. There was another eruption, known as the "doctor's rash," which appeared upon the persons of sensitive individuals stripped for examination. He had seen this in several cases, in one of which it had been very marked.

Dr. Denslow recalled the case of a young woman in whom a scarlatiniform eruption always appeared upon the body on exposure to sunlight.

The Relative Frequency of Moles on the Head and Face, and their Pathological Changes.—Dr. Sherwell said that, in looking up the statistics of one of the institutions with which he was connected, he had found that in a period of eighteen months he had seen forty-seven patients suffering with neoplastic and hypertrophic growths. In thirty-six the growths had occupied the face and head. In seventeen the growths were classed as epithelioma. Moles and similar growths, while common on other parts of the body as well as the face, seemed less likely in other situations to undergo destructive pathological changes. The vicinity of the eyelids and bridge of the nose was, in the author's experience, their most common seat. The most rational explanation of their frequency in these situations was the abundant blood-supply. If, however, this hypothesis was accepted, why should nævi not oftener degenerate? He had often operated on these latter deformities, but had never seen more than a slight keloid change result. The speaker then referred to the special danger of malignant degeneration which attended the presence of moles in persons of advanced life. In regard to treatment, he recommended that, when malignant action was either present or suspected, the use of Volkmann's curette, followed by the potential cautery, was the most efficient and easiest method of treatment.

Exfoliative Dermatitis (Pityriasis Rubra?) with Bullous Lesions.—Notes of a case of this affection by Dr. W. A. Hardaway, of St. Louis, were read by the secretary. When the patient was seen by the author, the chest, arms, back, and thighs presented the usual appearances of pityriasis rubra. There was neither moisture, crusting, nor appreciable infiltration. The skin was shining. In the morning a handful of scales could be gathered from the sheet, but they were not so large as was usual, and were inclined to be furfuraceous. The face was not involved. Three or four days after the first visit there had appeared upon the thighs, abdomen, and buttocks a number of tense bullæ. Their appearance was preceded by a distinct chill, and followed by a moderate elevation of temperature. The bullæ had appeared in successive crops of not more than a dozen, each crop being preceded by a chill. At the end of a week the bullæ had ceased to appear, and had gradually improved.

A Case of probable Tuberculosis of the Skin.—Dr. Tilden related the history of a case occurring in a healthy-looking boy of two years of age, who had presented six or eight cutaneous lesions scattered over various parts of the body. These were of about the size of a split pea, slightly elevated above the level of the skin, and of a bright-red color, which disappeared entirely on pressure. They were hard to the touch, with borders of sensible infiltration. They had appeared within the previous five months, and had been very slow in growth. During the previous three months there had been failure in appetite and strength. In nearly all of the nodules there had ensued softening, with formation of pus, which had been discharged, and this had been followed by cicatrization. Four months later there had appeared in the left buttock a swelling which gave an obscure sense of fluctuation. In February the swelling in the buttock had increased in size, and there was more fluctuation in it. There was at this time sufficient outward curvature of the lumbar vertebræ to justify a diagnosis of Pott's disease. The author thought the most probable diagnosis to be tuberculosis of an unusual form.

The Congress of American Physicians and Surgeons.—A communication with reference to the organization of a congress was received, and the following committee of conference, to report at the next annual meeting of the association, was appointed: Dr. H. G. Piffard, of New York; Dr. F. B. Greenough, of Boston; Dr. R. B. Morison, of Baltimore; Dr. G. H. Tilden, of Boston; and Dr. Le Grand N. Denslow, of St. Paul.

Book Notices.

A Practical Treatise on Diseases of the Kidneys and Urinary Derangements. By Charles Henry Ralfe, M. A., M. D. (Cantab.), etc. With Illustrations. Philadelphia: P. Blakiston, Son, & Co., 1885. Pp. xii–572. [Price, $2.75.]

In this work Dr. Ralfe has sustained his reputation for thoroughness, clearness, and conciseness, as well in the presentation of the views of others as in the statement of the conclusions which he draws from their writings and his own labors and experience. The opening chapter is devoted to the consideration of general symptomatology, and includes full reference to all the important features of Bright's disease, including pain, enlargements of the kidney, the anatomical relations of the kidney, dropsy, cardio-vascular changes, uræmia, acetonæmia, neuralgia, ophthalmoscopic changes, renal asthma, pulmonary complications, derangements of digestion, and the condition of the skin.

In the second chapter the clinical examination of the urine is very fully considered. More than a hundred pages are devoted to this very important division of the work; and it can be safely said that the chief methods of search for all of the usual and unusual normal and pathological urinary elements, whether in solution or in sediment, are fully described and considered.

In the next chapter occurs an interesting discussion of the classification of Bright's disease, in which the various classifications of standard writers are given and compared, and finally a simple and logical one is arrived at which the author announces as his own. In this chapter also are discussed the ætiological varieties of nephritis and the general subject of treatment.

Suppurative inflammation of the kidney is next considered, including pyæmic abscesses, pyelitis, pyo-nephrosis, and pyelonephrosis, together with the specific ætiological factors of these different conditions.

Under the head of degeneration and infiltration, waxy changes, cysts of various kinds, fatty degeneration (the result of acute poisoning), and the parenchymatous degeneration or cloudy swelling of acute febrile processes are fully discussed. Syphilis, scrofula, and tubercle are also given a place here in their relations to certain structural changes in the kidneys.

The subjects of new growths and parasites claim each a special chapter, and then the author passes on to consider abnormities in position, in form, and in number. Diabetes insipidus and mellitus, as well as glycosuria, are next placed before the reader, and then follow suppression and retention in well-considered articles. Stone and gravel, functional albuminuria, peptonuria, and hæmoglobinuria occur next, and then comes an appendix, in which are detailed the complex chemical processes for quantitative analysis of the urine; and finally the whole is concluded by an elaborate bibliography of the subject, preceded by a short chapter on the dietetic treatment of diabetes.

At a time when so much callow writing is devoted to the kidneys, both at home and abroad, when one turns away from a new book on kidney diseases almost as from a quack advertisement, it is with very keen pleasure that we commend this really meritorious work to our readers.

Enteric Fever: its Prevalence and Modifications, Ætiology, Pathology, and Treatment, as illustrated by Army Data at home and abroad. By Francis H. Welch, F. R. C. S., Surgeon-Major, A. M. D. (Alexander Prize Essay, December, 1881—modified.) Philadelphia: Presley Blakiston, Son, & Co., 1883. Pp. viii–190. [Price, $2.]

It is attempted in this work "to show the relation of the enteric fever of England to that in the world at large, as illustrated by army data, and how far these support the school teaching as to its nature and clinical features, or the asserted potency of climate, or this combined with youth and recency of arrival in the tropics." The conclusions on the latter points, to which the author has been led by a judicial and painstaking comparison of data not generally utilized, are affirmatory. It is shown convincingly that the cause of enteric fever is not dependent, in working its effects, either upon climatic conditions or the association of these with special states of the organism, and that the "specific theory" to which the experience of civil practice has given origin "more closely embraces the military data than any other, and is the only one which meets the requirements of the facts."

The chapter on the ætiology of enteric fever is a collection of material to which must be attached more than ordinary value, both for its general trustworthiness and for the specialty of its source. The author deals with the pathology and treatment with much scientific strength and with some originality, and we are of the opinion that the work, as a whole, is deserving of respectful recognition.

How to Care for the Insane. A Manual for Attendants in Insane Asylums. By William D. Granger, M. D., First Assistant Physician, Buffalo State Asylum for the Insane, Buffalo, N. Y. New York and London: G. P. Putnam's Sons, 1886. Pp. ix–96.

This little volume is the condensation of a series of lectures delivered by the author to the attendants and trained nurses at the Buffalo State Asylum for the Insane. Although it is intended solely as a book of instruction for the asylum attendant, yet it is so full of valuable suggestions in regard to the management and treatment of every phase of insanity that it is well worth the careful consideration of the physician. The opening chapters are devoted to a brief description of the nervous system and its more important functions, the relation of the mind to the brain, and to a discrimination between the different evidences of insanity, such as delusions, hallucinations, illusions, etc.

The author has endeavored to place these matters in a form which shall not only be brief, but at the same time comprehensive and to the point. The remainder of the volume, which considers the duties of attendants, the care of the insane, the treatment of accidents and emergencies, and the care of the bodily condition and mental states of the insane, is written in an exhaustive and thorough manner, and leaves but little to be desired.

Contributions to the Anatomy and Pathology of the Nervous System, based on researches conducted in the private laboratory of E. C. Spitzka, M. D. Series III, No. 2. Nodular Tumor of the Corpus Callosum. By Francis A. McGuire, M. D.

This paper is one of an important series, especially to students of comparative anatomy and neurology. The author has recorded the case on account of its rarity, and adds that he believes it to be unique in medical literature.

Diseases of the Lungs (of a Specific, not Tuberculous Nature). Acute Bronchitis; Infectious Pneumonia; Gangrene, Syphilis, Cancer, and Hydatids of the Lungs. By Professor Germain Sée, Member of the Academy of Medicine, etc. Translated by E. P. Hurd, M. D., with Appendices by George M. Sternberg, M. D., Surgeon, U. S. Army, Professor Dujardin-Beaumetz, Member of the Academy of Medicine, etc. New York: William Wood & Co., 1885. Pp. xxv–398. [Wood's Library of Standard Medical Authors.]

The author has taken for the basis of his work the recent researches in bacteriology, and has built up a nosology upon that foundation rather than upon anatomical lesions. He accepts without reservation the theory that low forms of micro-organisms play the all-important and chief rôle in the causation of disease. The extent to which he has done this may be conjectured when it is stated that he accords to pleurisy and rheumatism a parasitic nature.

Bronchitis is divided into the following four groups: I. Accidental broncho-catarrh, or bronchitis a frigore. II. Primitive infectious broncho-catarrhs, including (*a*) influenza, (*b*) whooping-cough, and (*c*) measles. III. Broncho-catarrhs that are secondarily infectious; such are the bronchitides developed in the course of small-pox, typhoid fever, and the various cachexias and septicæmias. IV. Bronchitides of physico-chemical origin; such are those due to various local irritants, dust, iodine, bromine, etc. Professor Sée's clinical chief, Matthieu, observed a painful dilatation of the stomach in influenza which disappeared with convalescence. We deem it an unnecessary and impracticable refinement to divide capillary bronchitis, as the author has done, into three forms—(1) bronchitis of the fine tubes, (2) bronchiolitis of the lobular branches, (3) alveolitis. Part II treats of pneumonia. The first three chapters are devoted to the pathogenesis of the disease. They give a review of the recent experiments made to determine the coccus of pneumonia. The author goes fully into speculations as to whether pneumonia is a specific local disease at the outset, with the subsequent development of constitutional disturbances, or whether it is a constitutional disease, with inflammation of the lung as a local expression of the general condition. It is the old question of diphtheria fought out in another field of the human economy. So long as the parasite remains confined to the pulmonary parenchyma, the disease is simple pneumonia; "when it diffuses itself and becomes general, invading the neighboring organs or penetrating the general circulation, it becomes infectant pneumonia."

Reasoning from *a priori* grounds, syphilis of the lungs is held to be due to a microbe which the author states has not yet been discovered. Lustgarten's syphilis bacillus is entirely ignored, not even being thought worthy of mention. The author puts the following three questions: 1. Can syphilis determine in the pulmonary tissue lesions similar to cirrhosis of the lungs? 2. Is pulmonary cirrhosis frequently associated with visceral syphilis? 3. Do there exist special characters attributable to syphilitic pulmonary cirrhosis? The first two questions are answered in the affirmative, the third is still surrounded with considerable darkness. Microscopically, sclerosis is the same from whatever cause, but the macroscopic characters in many cases of syphilis of the lungs are quite characteristic. Though recognizing the difficulties attending the diagnosis of this affection, the author thinks that in many cases we can arrive at a presumable diagnosis by taking all the characters into consideration.

The whole book is written in that clear, flashing style characteristic of the author's pen. The arguments are arranged with such skill and force that one may find himself convinced against his will. But we think many points in bacteriology will still have to be settled before we can accept the author's data as facts in medical science. The translator has done his part exceedingly well. His preface (which, by the way, is rather long) is a plea in favor of the "germ theory" of disease. We should like to call his attention to what evidently must be a typographical error on page 147, where cannula is used instead of trachea. Appendix A, by Dr. Sternberg, is a reprint of a paper in the "American Journal of the Medical Sciences," for July, 1885, and seems to have been added as a counterpoise to the strong assertions within the text.

The second appendix, by Professor Dujardin-Beaumetz, gives a clear and impartial review of bacteriology almost up to the present period. It forms a valuable addition to the work.

Endemic Goître, or Thyreocele, being the Thesis for the Degree of Doctor in Medicine of the University of Durham for which the Gold Medal of the Year 1884 was awarded, together with subsequently added Foot-Notes and Appendix. By William Robinson, M. D., M. S. London: J. & A. Churchill, 1885. Pp. vi–66.

This monograph gives a full and lucid description of endemic goître. The pressure effects of the enlarged gland may give rise to paralysis of the adductor muscles of the larynx and of the crico-thyroid muscle from pressure upon the inferior laryngeal arteries. The author favors this view of the pathology of goître. He holds that goître and cretinism are due to the same causes, and that they are merely different stages of the same affection. Assuming this to be the case, it may be asked why is it that goître is so much more common in women than in men, while the reverse holds good in cretinism? The author does not think that this affection can be due to any metalliferous impurity in the water. Still he maintains that it is due to potable water, but leaves us in the dark as to what ingredients in the water constitute the essential factors. Idiosyncrasy, he thinks, plays not an inconsiderable part. Preference is given to division or removal of the isthmus of the gland as a radical means of cure. The little brochure can be well recommended to any one wishing to possess himself of the latest views on goître.

The Principles and Practice of Surgery. By John Ashhurst, Jr., M. D., Professor of Clinical Surgery in the University of Pennsylvania, etc. Fourth Edition, Enlarged and Thoroughly Revised. With Five Hundred and Ninety-seven Illustrations. Philadelphia: Lea Brothers & Co., 1885. Pp. xxviii–33 to 1118, inclusive.

The author states in the preface that the more important recent observations in surgical science and such novelties in surgical practice as have seemed to him really improvements are incorporated in this volume. In view of this statement, the exclusion of what is known as the antiseptic method is practically a declaration against the method. The author does not seem to consider as real improvements the careful employment of carbolic-acid solutions for the submersion of instruments, or the use of sublimate solutions for irrigation, or of absorbable drains, ligatures, and sutures, or of iodoform and sublimate gauze, or of protection for dressings, from all of which such satisfactory results have been attained in the hospitals of this city and which have been adopted by nine tenths of the prominent surgeons of the East. To the writer of this notice, who once held with Professor Ashhurst that the antiseptic method was not what it was alleged to be, but who was convinced of its superiority by careful trial and comparison of methods as shown by results, this seems an unpardonable fault in a work on surgery. The silk ligature is recommended rather than the catgut or other animal ligature. About eight hundred years ago Avicenna recommended that "a ligature be applied—namely, a flaxen thread." The dressing preferred after an amputation is "a piece of sheet lint soaked in pure laudanum, covered with oiled silk or waxed paper and secured in place with a light recurrent bandage" (page 108). "The stump should not be disturbed for forty-eight or seventy-two hours, by which time suppuration will usually have begun." Of the amputations done in this city under a strict observance of the antiseptic method, it is safe to say that in one half of them it is not necessary to change the dressing earlier than the tenth day, and many are not changed for a longer period. If, as the writer asserts (page 157), corrosive-sublimate solutions have killed at least twenty-two patients, no fewer than seven of those having died in a single American hospital, does this prove the superiority of the old method? The danger of poisoning by the employment of a solution no stronger than 1 to 3,000, in experienced hands, is known to be insignificant.

The strong preference expressed for the use of ether rather than chloroform as an anæsthetic agent will meet with the hearty approval of the great majority of surgeons in extensive practice. In the article on transfusion the employment of saline solutions is not given the prominence that it is believed to be entitled to, as this practice has already met with much success. We differ with the author as to the advisability of removing the axillary glands in all cases of cancer of the breast in which they are only slightly enlarged. If the general condition of the patient justifies a prolonged operation, a careful removal of these glands should be effected when the breast is amputated. The description of the procedures in the deligation of arteries is not sufficiently explicit. The following may be quoted as an example: "*Vertebral Artery.*—This vessel may be reached by an incision corresponding to either the anterior (Maisonneuve) or the posterior border (Smyth) of the sterno-mastoid muscle. The guide to the artery is the transverse process of the sixth cervical vertebra" (page 207). The reviewer is convinced by experience that these directions are not sufficient to guide one to the artery. On the whole, we can not commend this work to the student or practitioner who desires to occupy a position in the ranks of progressive surgery. The present edition of the work is enlarged by the addition of more than fifty pages. The typography, illustrations, and paper are excellent, and the binding is quite up to the high standard of the publishers.

Manual of Nervous Diseases and an Introduction to Medical Electricity. By A. B. Arnold, M. D., Professor of Diseases of the Nervous System and Clinical Medicine, College of Physicians and Surgeons, Baltimore. With Illustrations. New York: J. H. Vail & Co., 1885. Pp. vii–170.

Notwithstanding the author's avowal in the preface, it is difficult to see why this book was ever written. It certainly is no better adapted to the use of the beginner than several other recent treatises, and is far inferior in every way to the excellent little work of Webber, of Boston, that has lately appeared. While the chapters upon anatomy and physiology, with which the book opens, show care, and are in the main well arranged, they are not sufficiently full, nor do they show that the writer is familiar with the advances made in his subject. The body of the book is fragmentary, and contains many erroneous and loose statements which it will do no good to criticise.

There is much in the book that may have been compiled, since the student may find it in any of his text-books of practical medicine; and what there is original is not likely to afford the reader much help in the attainment of neurological knowledge.

The Medical Student's Essentials of Physics. By Condict W. Cutler, M. D., late House Physician, Bellevue Hospital, etc. New York: J. H. Vail & Co., 1884. Pp. 192.

We are inclined to question the "thorough fundamental knowledge" of chemistry and physics which the student will derive from this little volume. As an aid to hasty review before examination it may be of some service, but the multiplication of such aids in every branch of science is much to be deprecated. The author's work is carefully and judiciously done, and we wish to be understood as criticising the *aim* of the book, and not the book itself.

BOOKS AND PAMPHLETS RECEIVED.

Microbes, Ferments, and Moulds. By E. L. Trouessart. With One Hundred and Seven Illustrations. New York: D. Appleton & Co., 1886. [International Scientific Series.]

A Reference Hand-book of the Medical Sciences, embracing the entire range of Scientific and Practical Medicine and Allied Science, by various writers. Edited by Albert H. Buck, M. D. Volume III. New York: William Wood & Co., 1886. Pp. 813.

Sulle Iniezioni di *Aspergillus glaucus* nel Sangue. Nota di Camillo Massa. Comunicata alla Società dei Naturalisti di Modena.

Intubation of the Larynx as a Substitute for Tracheotomy in the Treatment of Pseudo-membranous Laryngitis; with a Report of Eighty-three Cases. By F. E. Waxham, M. D., etc. Chicago.

The Relation of Hospitals to Medical Education. By Charles Francis Withington, M. D. Boston: Cupples, Upham, & Co., 1886.

Transactions of the College of Physicians of Philadelphia. Third Series. Volume the Eighth. Philadelphia: P. Blakiston, Son, & Co., 1886. Pp. lx to 460.

Transactions of the Louisiana State Medical Society at its Eighth Annual Session, held at New Iberia, La., April 14, 15, and 16, 1886.

Deductions from Ninety-one Cases of Rheumatism, being a Consideration of the Report of the Committee on the Collective Investigation of Disease of the Medical Society of the State of Pennsylvania. By William B. Edwards, M. D., etc. [Reprinted from the "Medical and Surgical Reporter."]

A Case of Ovariotomy, with Comments. By L. S. McMurtry, A. M., M. D., etc. Danville, Ky. [Reprinted from the "Medical Herald."]

Intestinal Casts; with the Report of a Case. By William B. Edwards, M. D., etc. [Reprinted from the "Medical News."]

Molluscum Contagiosum: an Analysis of Fifty Cases. By Charles W. Allen, M. D., Surgeon to Charity Hospital. [Reprinted from the "Journal of Cutaneous and Venereal Diseases."]

The Artificial Feeding of Infants. By John M. Keating, M. D., etc., Philadelphia. [Reprinted from the "Annals of Hygiene."]

Reports on the Progress of Medicine.

MATERIA MEDICA, PHARMACY, AND THERAPEUTICS.

A Study of Some New Purgatives.—Dr. Desnos ("Bull. gén. de thér.," Jan. 30, 1886) has been making a study of the physiological effects of the following four new purgatives: baptisine, sanguinarine, juglandine, and phytolaccine. He has given these purgatives to 48 different individuals in the following proportions: Baptisine to 14, sanguinarine to 4, juglandine to 13, and phytolaccin to 17. They were given in pill form in doses of 10, 20, and 30 centigr. (1½, 3, and 4½ grs.). The first dose was administered at 10 A. M., and the second dose at 10 P. M. The four drugs had the common property of causing no disturbance whatever of the stomach. In some of the cases purgation occurred after the first dose, in the majority of cases not until some hours after the second dose, and in a few cases of obstinate constipation no effect followed until an enema had been given. Baptisine proved to be an efficient cholagogue, and, excepting a few failures in patients who were in bed, it showed itself a faithful purgative. The dose employed ranged from 10 to 30 centigr. (gr. 1½–4½). Sanguinarine did not fulfill the expectations derived from experiment with that drug. The author has given it in as large a dose as 60 centigr. (gr. 9) with negative results only. Juglandine exhibited marked cholagogic properties in doses of 10 to 20 centigr. (gr. 1½–3). Phytolaccin is also an efficient cholagogue in the same doses as the preceding. The author prefers it to all the others. It produced easy and copious stools containing considerable bile. In large doses it provoked vomiting, followed by depression, and in a few cases even by convulsions. In conclusion, the author states that baptisine and juglandine are destined to render incontestable service as laxatives in spite of some inconveniences, and that phytolaccin, being most certain and attended with fewer inconveniences, will form a valuable acquisition to the therapeutics of constipation. Sanguinarine, on the other hand, does not deserve to come into favor.

Iodide of Potassium in Spasmodic Asthma.—Of the various therapeutic measures that have from time to time been lauded in the treatment of asthma, none has stood the test of time so well as iodide of potash. It was, we think, the great French clinician Trousseau who first apprised the profession of its therapeutic value in that disease. Dr. J. Ormerod ("Practitioner," April, 1886) publishes in tabular form the results he obtained with iodide of potassium in the treatment of thirty-six cases of spasmodic asthma of varying intensity and pathology, but all possessing the common feature of attacks of difficulty of breathing coming on for the greater part during the night or early in the morning. He grouped his cases, as well as the circumstances would admit, into four classes. I. Uncomplicated asthma. II. Asthma complicated with bronchitis or emphysema. III. Asthma with secondary emphysema. IV. Asthma secondary to bronchitis or emphysema. The remedy proved a failure in nine cases—*i. e.*, only in 25 per cent. There were only five cases in group IV, but the author thinks the iodide did good in some of them. The drug appeared to have the most influence on the nocturnal attacks of dyspnœa; in many cases it caused them entirely to disappear, in others it had the effect of reducing them in frequency and in severity. But a troublesome cough, or a certain shortness of breath on rising in the morning, persisted. The author does not favor the view that the beneficial action of the iodide resides in the coryza it produces. In one case the attacks had been preceded by coryza, and they were nevertheless stopped by the iodide. He compares the action of iodide in spasmodic asthma to that of bromide in epilepsy. The iodide and bromide are about equally efficacious in the respective diseases. Their chemical similarity is compared to the similarity of the pathology of asthma and epilepsy. Relapses on the discontinuation of the treatment are more speedy in epilepsy than in asthma, but the proportion of asthmatics unaffected by the iodide is probably larger than that of epileptics unaffected by the bromide. The dose of the iodide that proved useful in most of the cases was five to ten grains three times a day.

Chloroform as a Hæmostatic.—Dr. Betz ("Memorabilien," 1885, No. 5; *ibid.*) relates two cases of uterine hæmorrhage in which he found chloroform of great utility in its arrest. In the first case fearful hæmorrhage followed a protracted labor which had to be terminated by the forceps. There was atony of the uterus, and hot water injected into the uterus failed to produce contractions. A sponge saturated with chloroform was passed into the uterus and some chloroform was poured on the abdomen. On the introduction of the sponge, a severe burning pain was felt along the genital passage, strong contractions of the uterus took place, and the bleeding ceased. The second case was one of hæmorrhage following an abortion at four months, which continued in spite of the ordinary treatment, and the patient became cold and pulseless. Chloroform was applied locally to the inside of the uterus through the means of a sponge in the same way as in the first case. The same burning pain was experienced, contractions of the uterus took place, and an arrest of the hæmorrhage ensued. The action of chloroform, Dr. Betz observes, differs from that of the ordinary astringents, not inducing coagulation of the blood as they do, but causing narrowing and closure of the blood-vessels in consequence of muscular contraction. The use of chloroform in this way may supersede the hypodermic injection of ether.

Urethane.—Professor Coze, in an elaborate article ("Bull. gén. de thér.," April 30, 1886), gives in detail the results of his experiments with the new drug urethane. It is a carbonate of ethyl, and its ready solubility in water renders it easy of administration.

Local Action.—The injection of forty to fifty cg. into the abdomen or lymph-sacs of a frog was followed by no local action. In the dog as much as eight grammes (ʒ ij) was injected into the peritoneal cavity without any untoward effect. No greater effects were obtained with other animals experimented upon.

Action on the Nervous System and Muscles.—Five cg. injected into a frog produced slight excitation, which was soon followed by a slight torpidity which quickly passed off. After larger doses the period of excitation was exceedingly short; then followed relaxation of the muscles with diminution of the reflexes, and the animal passed into a state of profound anæsthesia. In this state there was apparent cessation of respiration while the heart continued to beat. The electric excitability of the muscles, however, during the anæsthesia, seemed impaired. The experiments on dogs and rabbits gave similar results, the doses, of course, being increased in proportion. Urethane increased the force of the heart's contractions and raised the arterial pressure. It lowered the temperature from 1° to 2°, according to the dose administered. It promoted all the secretions, and in fairly large doses caused diarrhœa. The nutrition of the animals underwent no impairment on the repeated administration of the drug. Urethane was found to have a remarkable antagonistic effect to strychninic convulsions. Five milligrammes of strychnine were injected hypodermically into a dog; three quarters of an hour afterward the dog was seized with tetanic convulsions. Immediately afterward five grammes of urethane were injected into the peritoneal cavity. Within five minutes the respirations became less rapid, and in three quarters of an hour the relaxation of the muscles was complete. In less than an hour from the time the urethane was injected the dog got up and walked, and on the day following it was as well as ever. The author sums up as follows: 1. Urethane has a powerful hypnotic effect, causes muscular relaxation, and in large doses produces anæsthesia. 2. It slows the pulse and respiration and lowers the temperature. 3. Having little or no local irritant effect, it may be administered hypodermically. 4. It produces no disturbance of the secretions or of nutrition. 5. It is a physiological antagonist to strychnine. 6. It would seem to be suitable, in man, in convulsions, but more especially in those of a tetanic character.

Urethane as a Hypnotic.—Dr. Sticker ("Ctrlbl. f. d. ges. Ther.," 1886, 3) sums up his results with urethane as a hypnotic as follows: 1. Urethane is an excellent hypnotic, bringing about its effect through its influence on the brain. It has the advantage over other hypnotics in that it is not followed by unpleasant symptoms, and that the sleep it induces has a close resemblance to physiological sleep. It can be administered in cases where other hypnotics, either because of idiosyncrasy or an injurious effect upon the heart and respiration, are contraindicated. 2. The minimum dose is one gramme (gr. 15), and in patients above fifteen years of age it can be increased to four grammes (ʒ j) without danger. The drug may be given in capsules or in solution in water, to which syrup may be added.

In a later number of the same journal (Heft vi) the author makes some further remarks upon the hypnotic effect of urethane. The failures and untoward symptoms reported by other observers he would attribute to an impure preparation of the drug. He always obtained the preparation he employed from E. Merck, of Darmstadt. Another cause of failure, he thinks, may be the administration of too large doses. He himself frequently observed that, while two grammes (gr. 30) produced a healthy sleep, when the dose was increased to four grammes no sleep followed.

Salicylate of Lithium.—Professor Vulpian (*Ibid.*) remarks that this salt is as efficient in acute rheumatism as salicylate of sodium, and, further, that it is also efficacious in acute gout. In a great number of cases of acute rheumatism salicylate of sodium relieves the acute pains, but the joints remain slightly painful and difficult of movement. In these cases salicylate of lithium substituted for the sodium salt will complete the cure. Again, in those cases of acute rheumatism in which the fibrous tissues seem most implicated the lithium salt will be found more beneficial than the sodium salt. In that form also in which the subcutaneous tissues seem involved, salicylate of lithium has proved more useful than any other drug. Even in chronic rheumatism in which the joints are deformed and partially ankylosed, salicylate of lithium has shown itself of some value.

For an adult the dose should be 4 grammes (ʒ j) per diem, which may gradually be increased to 5½ grammes (℈iv, gr. iij). Larger doses are followed by symptoms of intolerance. Salicylate of lithium is soluble in water and has a pleasant taste. It contains more salicylic acid, proportionately, than salicylate of sodium. Like the latter salt, its administration is attended with unpleasant symptoms, which, however, do not attain to the same degree. These consist of a more or less severe headache, dizziness, and difficulty of hearing, without noises in the ears, as in the case of the sodium salt. Occasionally it produces colic and diarrhœa—symptoms never observed with salicylate of sodium. The latter symptoms must be attributed to the lithium and not to the salicylic acid.

Salol, a New Anti-rheumatic and Antiseptic.—Dr. Sabli (*ibid.*, 1886, 3) has discovered a new compound in which salicylic acid combines with phenol, to which he has given the name of salol. It is a white powder, tasteless, with a slight aromatic smell, insoluble in water, but soluble in alcohol. The author made several experiments on animals with the drug, and found that the total quantity given with the food could be detected in the urine. Decomposition takes place within the body, through the influence of the pancreatic juice, when the drug passes through the stomach unchanged, which may account for the absence of nausea and vomiting. Sabli did not encounter any unpleasant symptoms with 4 grammes (ʒ j) daily, and he himself took as much as 8 grammes (ʒ ij) in one day, without experiencing any noises in the ears. It did cause noises in the ears, however, in some patients, but not to the same degree as salicylate of sodium. Under the administration of salol the urine becomes dark, as it does when carbolic acid is given.

The author has given salol in all rheumatic affections, and has attained, at least, the same results as he would have with salicylate of sodium; if anything, the fever seemed to subside more rapidly under the former. A case of chronic urticaria which had resisted all other treatment was rapidly cured with salol, as were also several cases of orbital neuralgia. Salol, in 2-gramme (gr. xxx) doses, three to four times daily, is a powerful antiseptic. In phthisis it is better to begin with small doses (gr. vijss.). The author recommends it in diabetes, and, on account of its antiseptic qualities, in diarrhœa, typhoid fever, cholera, and cystitis, and as a surgical dressing instead of iodoform. He has had a good result with it in one case of ozæna. It can be used locally in gonorrhœa. To the alcoholic solution some water may be added and an emulsion is thus formed.

Oil of Eucalyptus in Malarial Disease.—Dr. J. H. Musser ("Ther. Gaz.," June, 1886) gives a critical analysis of the results he has obtained with eucalyptus in the various forms of malarial poisoning. Great care was exercised in diagnosis, and twenty-eight patients were selected for treatment. Of these, nine were cured, ten not cured, five were relieved, but other drugs were used in addition, and five did not report a second time. Analyzing the nine cured cases, one was of quotidian type, five were tertian, one was quartan, and two were irregular. The disease was acute in five, chronic in four. The cases were under observation from ten days to six months. All the attacks developed in the usual malarial season, and seven of the patients resided in a positively well-known malarious locality. The drug was administered in forty-four other cases in which the symptoms showed periodicity and consisted in irregular febrile invasions, gastro-intestinal disorder, and neuralgias. Only eighteen of these cases remained under observation long enough to be of any statistical value. Fourteen patients were relieved and four were not relieved. The former were under observation from five days to a year.

The oil, which is quite distasteful, may be administered in capsules, in emulsion, or in glycerin. Most of the author's patients took it on a lump of sugar. Ten drops are usually given to adults, three or four times daily. The author thinks smaller doses (gtt. iij–v), repeated oftener, would prove more beneficial.

He draws the following conclusions: 1. Oil of eucalyptus is of decided value in about one third of all cases of intermitting malarial fever. 2. It has no specific value in any one type of the disease. 3. The longer the duration of the disease, the less liable is it to do good. 4. Relapses are not prevented by it. 5. Its influence on the spleen has not been demonstrated. 6. A dose of ten drops four times daily is a sufficient dose, but five drops every three hours would possibly be of greater value. 7. Good results are not attained so quickly as by large doses of quinine, but a good effect should be observed within five days at least.

Bismuth Subnitrate in Fœtid Perspiration of the Feet.—Vieusse (quoted in "Practitioner," May, 1886) draws the following conclusions: 1. Profuse perspiration of the feet, whether accompanied by pain or fœtidity, is easily cured by the application, with slight friction, of subnitrate of bismuth upon the diseased parts. 2. In opposition to the opinion generally held, according to which the suppression of exaggerated perspiration may produce numerous accidents of metastasis, observation shows that the cure of this affection has not been followed by any unfavorable results, and that, if these are observed, they should be attributed to other methods of treatment hitherto employed. 3. In the cure of this disease, subnitrate of bismuth appears to exercise a purely local action, rendering the superficial cuticular structures firmer and more resistant. 4. In certain cases the remedy suppresses only temporarily the profuse perspiration of the feet, but causes the fœtid odor, as well as the pain, which is the consequence of the exaggerated secretion, to disappear permanently.

Saccharin.—Dr. L. Wolff ("Ther. Gaz.," July, 1886) contributes a short article on the new chemical compound, saccharin. It was first produced by Dr. C. Fahlberg in 1879. It is a white powder, composed of irregular crystals, slightly soluble in water at the ordinary temperature, but dissolving readily in warm and boiling water, from which it crystallizes out on cooling. It is readily soluble in alcohol and ether. The property which gives to it a therapeutic value is its intense sweet taste, which is so great that one part in seventy thousand of water is distinctly perceptible. According to Professor Mosso, who has recently studied the physiological effect of saccharin, it does not, like benzoic acid, become converted into hippuric acid, but is found in the urine in the same chemical condition as ingested. Frogs can be kept alive indefinitely in a neutralized watery solution of saccharin. Given in large doses to dogs, it caused no change in the nutrition of the animals, and the quantity of urea eliminated remained unchanged. When animals were given saccharin and kept on full diet, they increased in weight. In man, doses of seventy-five grains produce no effect, and the appetite is said to be increased during its use. Saccharin, therefore, possesses no toxic or deleterious effect on the human organism. Therapeutically it is of value, in that it may be substituted for sugar in diabetes mellitus, and in obesity. The author found that it disguised the bitter taste of quinine in one part to two of the latter. In cases of disturbances of digestion, attended with fermentative processes, and in which sugar and carbohydrates are contra-indicated, it may be used as a corrective for the nauseant taste of other remedies, especially as it has decided antiseptic powers.

The Use of Manaca in Rheumatism.—Dr. F. Spencer Halsey (*ibid.*) while house physician at the Almshouse and Workhouse Hospital, Blackwell's Island, during the summer of 1885, employed fluid extract of manaca in many cases of different forms of rheumatism. He gives the clinical records of seven cases as typical of the class in which manaca may prove of service.

Case I was acute at the outset, but became chronic after the acute symptoms had subsided under the administration of salicylate of sodium. Oil of gaultheria was tried for a few days without benefit, then the fluid extract of manaca was given, and all the symptoms underwent marked improvement. When the patient was discharged, a month later, she was enabled to get around with little difficulty. The remaining six cases were chronic from the beginning. The fluid extract of manaca gave beneficial results in three of them; in the three others no improvement resulted. The remedy was given in fifteen-minim doses at the start and rapidly pushed to ʒ j, three times a day. In one case the drug was increased even to ʒ ij, but the patient experienced no relief from his rheumatic pains and complained of dizziness. The drug was discontinued and oil of gaultheria substituted with good results.

Dr. J. Berger ("St. Louis Med. Jour.," May, 1886) states that he has used manaca in rheumatism for about five years, and that it has given better results than any other single remedy he has ever employed, and that it is perhaps better than any combination of remedies. He has used it in all forms of chronic rheumatism, and thinks there is no doubt as to its possessing anti-rheumatic properties to a great degree. He would explain its *modus operandi* by the power it has of eliminating lactic and uric acids from the system and preventing their formation in excess, by assisting digestion and assimilation.

The Physiological and Therapeutical Properties of the Derivatives of Caffeine, particularly of Ethoxycaffeine.—Dr. Dujardin-Beaumetz ("Bull. gén. de thér.," March 30, 1886) contributes an important article on this subject. Ethoxycaffeine exists as white needle-like crystals, which melt at 140° F., and are only slightly soluble in alcohol and ether and quite insoluble in water. Filehne, who has studied the action of caffeine and ethoxycaffeine on frogs, states that the combination of the ethoxyl group with caffeine modifies the action of the latter drug upon the nervous system and imparts to it narcotic properties.

In man fifty to seventy-five centigr. (gr. 7½–11) produce dizziness, and at times headache with considerable intellectual torpor. Injected subcutaneously in frogs, it accelerates the heart's action, and produces diuresis and symptoms of narcotism.

The author has employed the remedy in cases of headache, either alone or in combination with equal parts of salicylate of sodium. The dose varied from twenty-five centigr. to one gramme (gr. iijss.–xv) during the twenty-four hours, and was given in fractional doses of ten centigr. (gr. jss.) every two or three hours. It often caused disturbances of the stomach, which, however, can be avoided by giving it in solution. In order to avoid this action of the remedy on the stomach, the author recommends the following formula: Ethoxycaffeine, 0·25 (gr. iijss.); salicylate of sodium, 0·25 (gr. iijss.); hydrochloride of cocaine, 0·10 (gr. jss.); linden-water, 60 (℥ ij); syrup 20 (ʒ v). To be taken in one dose. The remedy was given in facial neuralgia, but the best results were obtained in cases of migraine. Two cases are cited in which ethoxycaffeine relieved the attacks in one and two hours respectively.

The Alkaloids of Jaborandi Leaves.—E. Harnach ("Arch. f. exper. Path. u. Pharm.," xx; "Dtsch. Med.-Zeit.," 1886, 53) has analyzed the other organic bases, besides pilocarpine, that are found in the leaves of the jaborandi plant. Jaborine, which resembles atropine in action, is found in small quantities. Pilocarpidine acts like pilocarpine, but is not near so strong. The third alkaloid, jaborandine, has the same effect on a frog's heart as atropine, and is much weaker than jaborine.

Atropine in Ptyalism.—Dr. Otto Hebold ("Dtsch. Med.-Zeitung," 1886, 61) recommends the hypodermic use of atropine in nervous ptyalism. He has used it in two cases with the very best results. In one of the cases the patient was discharging a litre of saliva in twenty-four hours. After the first hypodermic the quantity of the secretion markedly diminished, and in a short time became normal. The second patient was equally benefited by atropine. The quantity employed ranged from $\frac{1}{75}$ to $\frac{1}{50}$ of a grain daily in the morning.

Miscellany.

Alkatrits, Alkametric Granules, and Alkadermic Pellets are names applied by Messrs. Frederick Stearns & Co., of Detroit, to certain new pharmaceutical preparations devised by them. An alkatrit (the word being coined from *alkaloid* and *trituration*) is described as a trituration of an alkaloid with a mixture of milk sugar and cane sugar, an alkametric granule is a small pill made from a similar trituration, and an alkadermic pellet is a compressed pellet for hypodermic use. Notwithstanding the formation of the word alkatrit, it is applied to triturations of glucosides as well as to those of alkaloids. An alkassayed fluid is the name of a fluid extract of a definite alkaloidal strength, a cubic centimetre being the equivalent of a gramme of a drug of assayed strength. We have received specimens of a number of these preparations, somewhat suggestive of "dosimetry," and they produce the impression of having been very carefully made. We do not doubt that they will be found convenient and conducive to accuracy of dosage.

Reed & Carnrick's Diet Tables.—We have received a handy little pocket-book, issued by Messrs. Reed & Carnrick, giving diet lists suitable for cases of Bright's disease, chlorosis, cholera infantum, chronic rheumatism, constipation, diabetes, diarrhœa, dyspepsia, fevers, gout, nervous affections, obesity, phthisis, also a general list for the sick and one specially suited to infants. The arrangement is simple, and the lists seem judiciously made up. For hasty reference the little book will doubtless prove very serviceable.

The New York Polyclinic.—It appears by the Annual Announcement that during the session of 1885 to 1886 two hundred and forty practitioners attended the various clinics, making eight hundred and twelve matriculates since the opening of the school in November, 1882. The present list of professors is almost identical with the one with which the Polyclinic started. Dr. Leaming, who remains the president of the faculty, has been made emeritus professor of diseases of the chest and physical diagnosis. The professors in charge of the various departments are: Dr. John H. Ripley, diseases of children; Dr. E. Darwin Hudson, Jr., general medicine and diseases of the chest; Dr. L. C. Gray and Dr. M. Allen Starr, diseases of the mind and nervous system; Dr. A. R. Robinson and Dr. E. B. Bronson, dermatology; Dr. J. A. Wyeth and Dr. A. G. Gerster, general surgery; Dr. V. P. Gibney, orthopædic surgery; Dr. P. F. Mundé, Dr. W. G. Wylie, and Dr. J. B. Hunter, gynæcology; Dr. E. Gruening and Dr. D. Webster, ophthalmology; Dr. D. B. Delavan, laryngology; and Dr. G. B. Fowler, physiological chemistry. A department of otology, newly created, is in charge of Dr. O. D. Pomeroy, and the laboratory of pathology and histology is in charge of Dr. J. S. Thatcher. We are informed that the increase in the size of the classes has made it necessary to add to the number of clinics, and that as many as eighty-six demonstrations will be given every week during the session of 1886 to 1887.

The Health of Michigan.—Reports to the State board of health for the month of August (the four weeks ending August 28th), kindly forwarded to us by the secretary, Dr. Henry B. Baker, show that diphtheria was present at forty-seven places, scarlet fever at twenty-eight, typhoid fever at forty-one, measles at twelve, and small-pox at two. During the month there was an increase of dysentery, diarrhœa, cholera infantum, and cholera morbus, and a decrease of neuralgia and bronchitis.

"**Over-frequent Physical Examinations,**" says Dr. Charles Francis Withington, in a pamphlet entitled "The Relation of Hospitals to Medical Education," lately issued by Messrs. Cupples, Upham, & Co., of Boston, "sometimes work an injustice to hospital patients. It is in acute diseases that they are especially likely to be made. In a pneumonia, for instance, there is great interest in following the various stages in the evolution of the disease. The area of consolidation and the character of the râles undergo such marked changes in a few hours that repeated and prolonged physical examinations of the chest are sometimes made, when nothing can be added thereby either to the diagnosis or to the indications for treatment. The development of the crepitant and subcrepitant râle and of the *crepitans redux* is particularly interesting to demonstrate to students, yet the frequent uncovering of the chest and the exhaustion incident to being auscultated and percussed by a class of students can not fail to be prejudicial to the patient. Physicians would defend their private patients against such injurious influences; they should be equally solicitous for hospital patients. It is not rarely that we see an expression of weariness come over the face of the patient who is in the hands of the too ardent and precise diagnostician. Its occurrence should always be the signal for a prompt suspension of the exploration. 'Do not probe the wound too curiously' is a maxim which should never be forgotten, either in surgery or in medicine.

"Sufferers from more chronic maladies, on the other hand, can generally support examinations frequent enough for precision of diagnosis as well as for clinical demonstration. When the exact amount of a pleuritic effusion or the precise size of a hypertrophied heart can be learned without compromising the patient's safety, it is our duty to learn them, for then there is no conflict between the interests of science and of the individual. The utilization of the opportunity for physical examination of patients to secure facility in the manipulation of various instruments of diagnosis, provided the operation is not itself dangerous and the physician exercises careful oversight that it does not become injurious through the maladroitness of the operator, is not an injustice to the patient. But the writer confesses to a sentiment of indignation upon seeing a class of students invited each to pass a uterine sound upon the occupant of a gynæcological table."

The Hudson River State Hospital for the Insane, at Poughkeepsie.—The managers have established, in connection with the institution, a training school for the instruction of those who wish to make a specialty of nursing the insane, either in private houses or in public institutions. Graduates of general hospital training schools will be admitted to the school for the period of one year. Upon passing a satisfactory examination at the close of the twelve months, they will receive diplomas bearing the seal of the hospital, and the signatures of the president of the board of managers, the medical staff, and the principal of the training school. They will be paid at the rate of twenty dollars a month during the first six months, and twenty-five dollars a month for the second six months. For those who remain in the service of the hospital after the completion of this term special rates of remuneration will be arranged. Women between the ages of twenty and thirty who are not graduates of general hospital training schools will be admitted to the school and receive a course of instruction covering a period of two years. After a satisfactory examination at the conclusion of this course they will be granted certificates of graduation bearing the same signatures as the diplomas. They will receive from ten to seventeen dollars a month, according to proficiency and time and value of service. Special rates will be made for hospital service after graduation. In connection with the hospital there is a training school for men between twenty and thirty years of age. The course of instruction covers two years, at the end of which certificates of graduation are bestowed upon evidence of competency. The men are paid from sixteen to twenty-two dollars a month, according to proficiency and time and value of service. Special rates are arranged with those who remain at the hospital after graduation.

All the pupils and nurses are allowed board, lodging, washing, and medical care if required, free of charge. Applicants for admission to the training school must pass the simple preliminary examination required by the New York Civil-Service Commission. This examination is conducted at the hospital by the officers of the institution, who constitute the provisional examining board. Applicants must be of healthy constitution and temperate and moral in habits, and must present letters certifying to character and qualifications from two or more responsible sources. The diplomas of trained nurses are received in lieu of letters. For the instruction and training of women, the managers have secured the services of Miss S. I. Hawley, a graduate of the Bellevue Hospital training school, with subsequent experience in a hospital for the insane. In her capacity of matron of the hospital and principal of the training school, she gives daily instruction at the bedside and at class recitations. Lectures are delivered throughout the year, by the medical officers, upon anatomy, physiology, insanity, accidents, emergencies, poisons, remedies, doses, ventilation, clothing, baths, food and feeding, minor surgical dressings, bandaging, subjects of interest to nurses in general medicine, and massage. Practical instruction is given in cooking. Applications for positions in the training school may be made to Dr. Joseph M. Cleaveland, Superintendent, Hudson River State Hospital, Poughkeepsie, N. Y.

Kennedy's Extract of Pinus Canadensis, which is now made by the Rio Chemical Company, of St. Louis, has long been known in this country, chiefly from the indorsement it received from the late Dr. Marion Sims as an efficient astringent and alterative when applied to mucous surfaces. It now seems to be coming into extensive use in England, where many medical men have reported excellent results with it in various catarrhal difficulties.

The University of Gratz.—The "Lancet" states that Dr. Anton Wölfler, formerly an assistant of Billroth's, has been appointed to the professorship of surgery.

Dr. Coe's Paper on Disease of the Uterine Appendages, published in a recent number of the "American Journal of Obstetrics," and made the subject of comment by Mr. Lawson Tait in a letter which we lately published, is highly commended by the "Lancet" in a leading article. "It is," says the "Lancet," "and will always remain, a valuable contribution to an obscure and much-abused subject."

The late Professor Gudden.—We are glad to learn, by an announcement in the "Lancet," that the Bavarian Government has granted a gratuity of £10,000 to the widow of the late Dr. Gudden, who lost his life in endeavoring to save that of the King of Bavaria.

A Medical Woman's Compliments to the President of the British Medical Association.—The "British Medical Journal," which prints the following letter, says that it is one of many, commendatory or condemnatory, received by Dr. Withers Moore since the recent meeting of the association:

"Sir: Having read your learned discourse on the subject of the higher education of women, I beg, though rather late, to thank you, on my own behalf and that of my sex generally, for your very high opinion of us, as expressed at the meeting of the British Medical Association; though I must confess that it is somewhat new and startling to learn that women were created solely for the purpose of propagating the human species, and, as such, for the mere convenience of that glorious creature 'man,' as represented by your own illustrious self. It may, perhaps, be showing my great ignorance and inferiority when I, as a woman, repudiate your highly flattering suggestions, and not only entirely and emphatically deny the truth of them (though you are such a very distinguished medical man), and assert that, having been created with an equal intellect as man's, and with an equal love of knowledge and independence, that in itself proves the utter fallacy of your disgusting theory. Of course, every one is aware that medical men are threatened with the loss of quite half of their practice by the admission of women into the profession, as their women patients would of course gladly give the preference to their own sex, when they have the opportunity; and as medical gentlemen are by no means indifferent to the question of pounds, shillings, and pence, it is not so much wonder that they express such horror at the prospect of their fat incomes being endangered. Though, however, on this account thay may deserve some pity, yet that alone will not be sufficient to preserve them from the ridicule and contempt excited by their miserable efforts to exclude women from the medical profession, the sordid motive for doing so being too palpable. Therefore, before saying adieu, let me give you one piece of advice, which is that, in your future opposition to the progress of women, not, at any rate, to repeat the disgusting and insulting and ignorant remarks on my sex, or else you may perhaps find by bitter experience that, though women are, as you make them out to be, on a level with the beasts of the field, they may yet be capable of showing their resentment at being told so by administering a sound chastisement on the offender, even though he may occupy the important position of President of the British Medical Association, or of any other ridiculous or trumpery association."

The Health of the State of New York.—According to the State board of health's "Monthly Bulletin" for July, the total mortality for the month was 9,376, 53·3 per cent. of the deaths being those of children under five years of age. Diarrhœal diseases caused 287·56 deaths in each thousand, typhoid fever 8, croup and diphtheria 40·95, and acute respiratory diseases 57·68.

THERAPEUTICAL NOTES.

Hippurate of Calcium in the Treatment of Cirrhosis of the Liver.—M. Dujardin-Beaumetz ("Union méd.," August 19, 1886) employs the following preparation:

Hippuric acid	6 drachms;
Lime-water	16⅝ ounces;
Syrup	20 "
Essence of lemon	1 drachm.

Dose, a tablespoonful several times daily, so that the equivalent of from one to two drachms of hippurate of calcium may be given. Under the use of this drug the writer has observed a marked amelioration of the ascites attending cirrhosis.

An Anti-dyspeptic Mixture.—Marini (*Ibid.*, August 19th) is credited with the following:

Tincture of nux vomica, Tincture of cinnamon, Tincture of anise, Tartrate of iron,	of each 2½ drachms.

Dose, thirty drops before each meal in a wineglassful of water. Between the two principal meals a teaspoonful of powdered charcoal should be given.

A Pill for Dysuria.—Mallez (*Ibid.*, August 14th) suggests this formula:

Venice turpentine	1½ drachm;
Camphor	1 "
Extract of opium, Extract of aconite,	of each 5 grains.

Divide into sixty pills, from three to six of which may be administered daily.

Glycerin	1 ounce.

Gaseous Medication per Rectum.—The "Lancet" of August 7, 1886, states that M. Bergeon has recently communicated to the Paris Academy of Sciences a new method of treating disease by gaseous rectal medication. His experiments have been mostly confined to the treatment of pulmonary diseases, for which he prefers sulphurous mineral waters. He passes from four to five litres of carbonic-acid gas through half a litre of sulphur-water, and then introduces the gas into the rectum, the operation being performed twice in the course of twenty-four hours. It is stated that after a few days there is a marked diminution of the cough and expectoration, while the sweating ceases and the general condition of the patients is much improved; meantime, careful physical examinations show a notable improvement in the local condition. The treatment is equally successful in the early and in the advanced stages of the disease.

Glycerites for Lichen Agrius.—Hillairet (*Ibid.*, August 12th) uses the following:

Calomel	15 grains;
Tannin	30 to 45 "
Glycerite of starch	1 ounce.

Chausit suggests another—viz.:

Tincture of aloes	1 to 2 drachms;

A Powder for Pruritus Vulvæ.—Martineau ("Annales méd.-chirurg."; "Glasgow Med Jour.") recommends the following formula, suggested by Delioux de Savignac:

Powdered lycopodium	1 ounce;
Subnitrate of bismuth	5 drachms;
Powdered belladonna-root	30 grains.

The following ointment may be applied at bedtime:

Tannin, calomel, or extract of belladonna	15 grains;
Glycerite of starch	1⅔ ounce.

The Proper Use of Antipyrine.—Pavay ("Wiener Med. Woch."; "Glasgow Med. Jour.") has employed this drug in a large number of cases and gives some useful rules for its administration. He adopts a middle course in regard to the dosage. When the temperature does not exceed 103° F. he divides 31 grains into three powders, and administers one powder every half-hour. If the thermometer registers 104°, three doses are given as before, each dose consisting of 15½ grains. With a temperature of 105° and above, he gives 62 grains in four doses, half an hour apart. It is seldom, the writer asserts, that the temperature fails to fall from 2° to 4°, and to remain lowered from six to sixteen hours. If for any reason the stomach will not retain the drug, it may be given by the rectum in doses of from 30 to 45 grains, or hypodermically in a fifty-per-cent. solution.

Pagliari's Iron.—Ferro Pagliari, an Italian preparation of iron, according to "L'Orosi" (quoted in "Am. Jour. of Pharmacy," Aug., 1886), represents the best and purest form of the drug for medicinal use. It is a transparent liquid, without odor, and having an acid reaction and taste. It mixes readily with water and dilute alcohol, and is preserved for a long time unchanged. The dose is from five to ten drops largely diluted, administered before breakfast and dinner.

Strophanthus.—This is a poisonous African plant, the properties of which are described in the "Am. Jour. of Pharmacy" for August, 1886. Fraser has isolated from an extract of the seeds a crystalline principle, called strophantin, which has an intensely bitter taste and is soluble in water and alcohol. The same writer mentions a tincture of strophanthus, the dose of which varies from four to twenty minims, two or three times daily. One fiftieth of a grain of strophantin may be injected hypodermically. This drug has a more powerful action upon the heart than digitalis, but has less influence on the vessels. Its expensiveness has hitherto prevented it from being generally used.

A Russian Ointment for Articular Rheumatism.—Grinevitski ("Brit. and Col. Druggist," July 24, 1886) is credited with this formula:

Extract of aconite	½ drachm;
Mercury ointment	1 "
Hyoscyamus ointment	½ "

Terebene Lozenges.—Hurty (*Ibid.*) suggests the following:

Terebene	3½ drachms;
Gum arabic	3 "
Water	2 ounces;
Powdered sugar	6 "
Powdered tragacanth	2 "

Make 100 lozenges.

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Lectures and Addresses.

LECTURES ON
THE DIAGNOSIS AND TREATMENT OF DISEASES OF THE CHEST.

DELIVERED BEFORE THE ASCLEPION CLUB,

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LECTURE IV.

Diagnosis of Valvular Diseases of the Heart.

IN the diagnosis of valvular diseases of the heart we must, in addition to the general principles involved in the diagnosis of all lesions, determine the nature of the cardiac affection and the associate disturbances in the general and pulmonary circulations. As regards the diseases of the valve itself, it is necessary, not only to ascertain the existence and nature of it, but also the extent to which it interferes with the functions of the heart. Our reasoning is based on the known physiological action of the circulatory apparatus and upon the results of clinical experience; the former is very important in determining what disturbances of the circulation exist, and the latter in making more exact diagnoses, which concern the relations of one organ to another, and aids one in the prognosis, which, in cardiac diseases, is sometimes extremely difficult and can only be based upon the accumulated observations of many clinical workers.

In the inspection of a patient suffering from valvular disease of the heart, we should notice, first, the conformation of the thorax; second, the area of the visible pulsations; third, the locality of the apex-beat. We should also notice the condition of the capillary circulation in the skin and the distension or pulsation of large vessels at the root of the neck. By palpation we determine more exactly the position of the apex, the existence or non-existence of epigastric pulsation, the presence or absence of pulsation in other abnormal situations, and the condition of the radial pulse. By percussion we are able to determine the size of the heart, particularly in those cases in which the apex-beat is indistinct, or where displacements have occurred, and also the condition of the lungs. Auscultation, the most important of the diagnostic methods, enables us to ascertain the existence or non-existence of cardiac murmurs, the alterations of normal sounds of the heart, and the presence or absence of unusual sounds external to the heart—that is, in the pericardium, the lungs, or the great vessels of the thorax and neck.

The first of these lesions to which I shall call your attention is that known as aortic stenosis. The disease, which is either an endocarditis or atheroma in the valves, results in the narrowing of the orifice which leads from the left ventricle into the aorta. As a consequence of this narrowing, the passage of the blood from the ventricle into the arterial system is impeded and more force is required for the ventricle to discharge its contents. If the other valves are normal, the ventricle, during the diastole, or the period of dilatation, receives the normal quantity of blood from the left auricle, but, as this usual quantity of blood must be propelled through an unusually small orifice, it will readily be seen that an increased effort on the part of the muscular walls is necessary to accomplish that object. If the narrowing is slight, very little disturbance will result from it, as far as the ventricular walls are concerned. If, however, it is sufficient to offer a perceptible obstruction to the flow of blood, the cardiac muscle, under the increased work it is called upon to perform, becomes hypertrophied and as a consequence of the hypertrophy that portion of the heart represented by the left ventricle, which is, of course, the largest part of the organ, occupies more space in the thorax. The left ventricle forms the posterior and apical portion of the heart, and when it is hypertrophied the size of the organ is increased in its antero-posterior and longitudinal diameters, the posterior surface of the left ventricle approaches the spinal column, and the apex reaches farther downward and outward, so that, when it impinges upon the thorax-wall during its contraction, the apex-beat is farther downward and farther outward than under normal circumstances. The hypertrophy of the ventricle is prone to exceed that which is actually required for the performance of the increased amount of labor required from it, particularly if the patient leads an active life or has a laborious occupation. At each contraction the blood is propelled with great force into the arterial system, the arteries are dilated, and the radial pulse is large and full. The systole, however, is slow, and the pulse, when the patient is quiet, is not accelerated as it is in mitral diseases.

When a fluid is forced through an orifice into a tube which suddenly expands beyond that orifice, an agitation is produced in the current which gives rise to what are known as fluid-veins; that is, to waves of vibration in the fluid. This probably arises from the fact that the fluid does not immediately fill the tube beyond, and in its distribution vibrations are produced; these vibrations, of course, are communicated to the walls of the tube and can be detected by a proper observation. In the case of the aorta, the fluid-veins which occur when the blood is forced through the narrow opening into the larger vessel beyond are propagated to a considerable extent in the primary branches of the aorta, and the vibrations communicated to the arterial walls become audible when the ear or the stethoscope is placed over the artery. It will be seen from this that, on inspection and palpation in aortic stenosis, we find the evidences of hypertrophy; that is to say, the apex-beat is displaced downward and outward and its force is increased. On auscultation, if the first sound of the heart is unaltered or simply louder and sharper than under normal circumstances, over the ascending portion of the arch of the aorta, which comes nearest the surface at about the conjunction of the second costal cartilage with the sternum on the right side, the vibrations become audible as a blowing or harsh murmur which is heard synchronously with the contraction of the ventricle. This murmur may also, in most cases, be heard in the carotid and subclavian arteries of the right side, and sometimes in those of the left. The pulse is not much, if at all, accelerated, but is strong and firm beneath the finger. These signs lead us to the conclusion that there is disease at the aortic semi-lunar valves, and that that disease has resulted in a narrowing of the aortic orifice; but we have yet to determine the very important question, "What is the extent of the lesion, and what is the prognosis?" The extent of the lesion can not be determined by the loudness or the harshness of the murmur or bruit which is heard over the aorta. This question must rather be determined by the effects of the lesion upon the heart and vascular apparatus. Other things being equal, the hypertrophy will be in proportion to the degree of narrowing of the orifice, so that great hypertrophy would indicate a marked degree of stenosis. This sign, however, can not be relied upon unless we take into account the clinical history of the case, and the existence or non-existence of other diseases. As a rule, the hypertrophy is progressive, though, if the lesion is slight and the patient leads a moderately quiet life, the progress is very slow. If, however, the stenosis is very great, or the patient continues to pursue a laborious occupation, the hypertrophy may advance very rapidly even with a moderate degree of stenosis. Again, if the stenosis is marked, dilatation occurs at an earlier date and the prolonged strain upon the cardiac muscle finally results in a weakening or atrophy, which, in accordance with the well-known physiological law of muscles under increased work, will increase in size and strength up to a certain point; when, however, the limit of increase is reached, a continuation of the strain will involve loss of power and consequent atrophy. The loss of power and atrophy of the ventricular muscle result in dilatation of the cavity of the ventricle, the muscle being no longer able to expel the entire amount of blood which has accumulated during the diastole; the systole is imperfect, part of the blood is left in the ventricle, and when the usual amount is discharged into it during the relaxation of the heart it is over-distended, and in this way permanent dilatation occurs. The diagnosis is made by observing the great increase in the size of the heart, the fact that the pulsation is not in proportion to the increase in its dimensions, and that the radial pulse loses its firmness; and, though it may be full as before, becomes soft and compressible. When the dilatation is great and the end is approaching, the pulse will become irregular. It finally results also, from the accumulation of blood in the ventricle, that the left auricle does not discharge its entire contents into the ventricle during the diastole, and that blood accumulates in the auricle and pulmonary veins, causing increased pressure in the vessels of the lungs and, finally, hypertrophy of the right side of the heart. When this occurs, the return current in the systemic veins is interfered with, and, as a result of this, anasarca supervenes. The dropsy first makes its appearance at the points most distant from the heart and where the venous current is naturally slowest—namely, in the feet. It is a diagnostic point of some importance that cardiac dropsy almost invariably makes its first appearance in the feet and about the ankles.

The next lesion that we have to consider is that which results in incompetency in the aortic valves, owing to some deformity of the valves caused by inflammation and subsequent contraction of the inflammatory segment in the former, or to dilatation of the root of the aorta. Here, generally, as we find it in old age or aneurysms, the segments of the valve no longer come in contact with each other, and its function is interfered with. The valve leaks or is incompetent.

It will be remembered that in the normal circulation of the blood, when by the contraction of the ventricle a large amount of the circulating fluid is at once forced into the arch of the aorta, that vessel, which is elastic, dilates under the sudden pressure. This dilatation is quickly succeeded by a secondary contraction, by which the pressure is brought to bear upon the blood; that which is nearest the heart is forced backward toward the ventricle, and, meeting the semi-lunar valves, closes them. The force of the arterial contraction is then available for the propulsion of the blood in its normal course onward through the arteries. If the valve becomes incompetent from the disease, when the secondary contraction of the aorta takes place part of the blood is returned to the ventricle, which has become relaxed. This return of the blood to the ventricle is known as regurgitation, or falling backward, and the lesion is commonly spoken of as aortic regurgitation. The effects of the regurgitation of the blood from the aorta into the ventricle are two-fold. In the first place, besides the normal amount which is received from the auricle during the period of relaxation of the heart, a further quantity flows through the incompetent valve and more blood accumulates in the ventricle during the diastole than when normal. The ventricle has a larger amount of blood to force through the aorta during its contraction, and the increased labor involved in this induces hypertrophy, as in the case of stenosis. We have, therefore, upon inspection and palpation, the same signs as in stenosis. In auscultation, however, the sounds are different, the reflux of the blood through the narrow orifice produced by the deformity of the semi-lunar valves into the larger cavity of the ventricle is accompanied by the production of fluid-veins, the vibration of which is communicated to the walls of the ventricle, and particularly to the septum ventriculorum, because the aortic orifice lies close to the septum and the downward current passes in that direction. The vibrations become audible over that portion of the surface of the heart which lies behind the sternum, and the bruit produced by this lesion is heard with greatest intensity in this region. Its point of greatest intensity is usually at about the center of the sternum, and from there it is propagated downward as far as the ensiform appendix. It is sometimes carried as far as the apex, and is occasionally most distinct at the left side of the sternum. It is not, and can not be, conveyed into the large vessels of the neck, though, when very light, it may be heard in this region, in which case it probably is conducted thither by the thorax-wall.

To determine the extent of aortic regurgitation, we must not rely at all upon the loudness of the murmur. Frequently, particularly in young subjects, the murmur of the aortic regurgitation heard with the diastole of the heart is so loud that it can be heard even at the back, though the leakage of the valve is slight. We must rather depend for this part of the diagnosis upon the secondary effects. When the incompetency of the valve is very great, the large amount of blood returned to the ventricle during diastole, added to that discharged from the aorta, induces rapid and very great distension; the heart is large, and the beat moderately forcible, because a large portion of the heart comes in contact with the thoracic wall. But the pulse, though full, has not the resistance which is encountered in aortic stenosis.

In the production of a normal pulse three factors are concerned: First, the contraction of the ventricle; second, the closure of the aortic valves with the contraction of the arch of the aorta; and third, the contraction of the arterial coats. These phenomena, following each other in quick succession, produce a prolonged increase of pressure in the arteries, which is appreciated by the finger to the radial artery as a slow, gradual heaving, followed by a slow recession of the pulse. When the leakage of the aortic valve is so great as to materially interfere with its function in securing the propulsion of the blood through the vessels, the character of the pulse is altered. With the contraction of the ventricle the artery is dilated suddenly as usual, but this dilatation is not followed up by the secondary wave, which occurs when the aortic valve closes, and the pressure rapidly sinks again. It gives an impression as if a body were suddenly shot under the finger and then suddenly withdrawn. It has been likened by Sir Dominic Corrigan to the stroke of a water-hammer, and is known as Corrigan's pulse, or as the water-hammer pulse. It is peculiarly characteristic and is best observed when the hand is elevated. In that case the long column of blood propelled through the artery by the systole of the heart loses its support from the aortic valve and the pressure quickly falls away. By this sign alone an expert observer will frequently diagnosticate the existence of an aortic regurgitation, and, if it is sufficiently well marked to excite such a suspicion in the mind of the examiner, the lesion is very grave. Besides this, the unusual conditions to which the arteries are subjected by aortic regurgitation give rise to a peculiar relaxation of the vessels, and during the systole of the heart they expand to an unusual degree, so that the pulsation of the arteries at the root of the neck, and even in the arm, becomes very perceptible, and the stethoscope placed over these arteries, particularly over the brachial artery, conveys to the ear a double arterial murmur—one accompanying the diastole of the artery, and the other the systole. This curious auscultatory phenomenon is highly characteristic, if not pathognomonic, of the lesion which we are considering. The secondary effects of aortic regurgitation upon the pulmonary circulation and systemic veins are more marked, and make their appearance at an earlier date than in the case of aortic stenosis. When the dilatation is extensive, sudden death is apt to occur by over-distension and paralysis of the ventricular walls during diastole.

Another point of considerable value in estimating the extent of the incompetency of the valve is its influence upon the second sound of the heart. The second cardiac sound is due entirely to the tension of the aortic semi-lunar valves at the period of their closure. If the deformity is very considerable, this sound is diminished or even entirely abolished, so that when the stethoscope is placed over the base of the aorta no second sound is heard, but it is replaced by the diastolic murmur. We know, then, that if the aortic second sound is distinct and accompanied by a bruit we have regurgitation to a minor degree, but if the sound is entirely replaced by the murmur the lesion is more extensive.

The diseases of the mitral valve are manifested by a different class of symptoms. The secondary effects of regurgitation or obstruction at the left auriculo-ventricular orifice are more extensive than those due to aortic disease, and, while they are not so frequently the cause of sudden death, cause much more illness and suffering during life. The subjects of mitral disease usually die slowly and in great agony. Sudden death occurs only to a small proportion of patients with aortic disease, but they are, according to my experience, more frequently carried off by other complicating conditions or accidents. But these statements are not so reliable as they would be if there were more instances of univalvular disease. As a matter of fact, the coincidence of aortic and mitral disease is common, probably more often met with than affections limited to one valve (?).

The condition known as *mitral stenosis* or *mitral obstruction* is brought about by endocardial inflammation, resulting in deformity of the valves, adhesion of the leaflets, and contraction, so as to narrow the auriculo-ventricular orifice. The impediment to the circulation is felt during the diastole of the ventricle and the systole of the auricle.

When the ventricle relaxes, under ordinary circumstances, the blood from the auricle pours in, and rapidly fills it. When the cardiac systole begins, the auricle first contracts, forcing its blood onward through the mitral opening into the ventricle, which is now fully distended. As the peristaltic wave reaches the ventricle, its contraction terminates that of the auricle, abruptly arrests the current of blood which has been coming from that cavity, closes the mitral valve, and propels the blood into the aorta. When the orifice is contracted, the blood from the auricle does not pass through quickly enough, but, even during the auricular systole, it may not be entirely emptied. The effect on the heart is, that the left auricle becomes hypertrophied in the same way that the left ventricle does in aortic stenosis. If the narrowing is considerable, its cavity is dilated. The left ventricle is not sufficiently filled during the diastole. It is never overfilled. The consequence is that it retains its normal size, or is even contracted. But, as the left auricle is overfilled with blood during every ventricular systole, the pulmonary vessels, which are not protected by valves, are unable to discharge their contents freely, and as the right ventricle continues to pump blood into them the pressure rises. This increased pressure in the pulmonary vessels acts as an obstacle to the expulsion of the contents of the right ventricle, and it undergoes hypertrophy.

If the stenosis increases, the pressure in the pulmonary artery will rise to such a point that the ventricle will fail to empty itself at every contraction, and dilatation begins. As soon as this occurs, the right auricle and great systemic veins become more or less turgid, and the secondary symptoms of visceral congestion and trophic changes in the abdominal organs make their appearance. To return to the mitral orifice, we must note the effect of the obstruction upon the onward current of blood. The narrowed opening leading into the large ventricular cavity affords the necessary conditions for the production of coarse fluid-veins. The current will impinge directly upon the anterior surface of the ventricle, being directed downward and forward toward the apex. The coarse vibrations, communicated to the septum ventriculorum, become audible over the anterior surface of the ventricular portion of the heart and the apex. The bruit, or murmur, indicative of mitral stenosis, is, in its typical form, rough, harsh, and devoid of the soft bellows-sound of the murmur of mitral regurgitation. It is heard over the anterior surface of the heart, to the left of the sternum, about where the septum ventriculorum comes to the surface. It begins with the systole of the auricle, or even during the diastole, and terminates when the ventricle contracts and stops the current by which it is produced. As it immediately precedes the contraction of the ventricle, which is the only part of the cardiac systole which we can ordinarily observe, it has been called the *presystolic bruit.* It is, more properly, the *auricular systolic murmur.*

The peculiar rough quality of this sound is highly characteristic. It might best be described by the word "hoarse," the coarse vibrations resembling those of the vocal bands when their natural pliability is interfered with by a laryngeal inflammation. This murmur is sometimes soft and blowing, and it may be entirely absent, particularly when the heart is greatly embarrassed and its contractions are rapid and ineffectual. Dr. Da Costa has described, under these circumstances, a peculiar "clacking" sound at the apex. I am not sure that I know exactly what he means by the term. In those cases of mitral stenosis without a murmur in which I have been able to make a diagnosis, it depended on the presence of the signs and symptoms which I am about to describe.

The symptoms of mitral stenosis are just what we might predict from our knowledge of its pathological physiology. They are the subjective and objective manifestations of those circulatory disturbances to which it gives rise. The patients complain of shortness of breath and inability to do muscular work, of cough, and, when the contraction is well marked or of long standing, of the symptoms of chronic gastric and enteric catarrh. The habitual engorgement of the pulmonary veins in these cases causes more or less continual bronchial catarrh, great liability to colds, and a marked tendency to hæmoptysis, which may be induced by very slight causes. It is not an uncommon mistake, among careless practitioners, to diagnosticate phthisis in persons suffering from mitral disease. I have frequently seen cases in which the chronic cough, dyspnœa, and hæmoptysis had led to the hasty conclusion that the patients were consumptive, whereas, by the very fact of their having this cardiac disease, they are rendered exempt from the graver pulmonary affections.

On inspection of the patient, we see that the breathing is somewhat accelerated, that there is a pulsation in the epigastrium, and that the abdomen is rather full. The prolabia frequently have a bluish tint, though this will, of course, depend upon the degree of obstruction present.

On palpation over the præcordia, in a typical case, the apex-beat is quite distinct, usually more so than normal, and displaced a little outward. It is preceded, in point of time, by a rough thrill very suggestive of the purr of a cat—the "purring thrill," or *frémissement cataire.* This thrill, when well marked, is very highly diagnostic of the disease; indeed, I think that, to the practiced observer, it may be said to be pathognomonic. In advanced cases, in which the right heart has become dilated and the tricuspid valve incompetent, the hand, laid over the lower hepatic region, may feel a gentle pulsation; though this, as Dr. Broadbent well says, is better appreciated by the sight than by the touch. It is supposed to indicate a pulsation of the liver, produced by regurgitation of blood in the hepatic veins, but it is probable that, in most instances, it is simply the pulsation of the hypertrophied and dilated right heart, propagated downward through the solid mass of the liver. It is only in the rare cases in which a distinctly expansile pulsation can be made out that we are justified in speaking of a pulsating liver.

The radial pulse is small, because of the diminished amount of blood passing through the left ventricle. It is more rapid than normal, and, when the disease is well advanced, very apt to be irregular. The pulse of mitral disease is, as a rule, more irregular than that of aortic. On auscultation, we hear the two sounds of the heart distinctly, but the first is preceded by the hoarse, rasping bruit described above.

The rhythm is peculiar, and, in a simple case, unmistakable. The period between the second and first sounds seems to be prolonged, and its latter two thirds to be occupied by the murmur, which is cut off short by the occurrence of the ventricular contraction. It has often reminded me of the growl of a dog, terminated by a short bark. The growl is the presystolic bruit, and the bark the first sound. If the ear or stethoscope is now placed over the second intercostal space at the left edge of the sternum—that is to say, over the origin of the pulmonary artery—the second sound will be heard much louder and sharper than over a normal heart, louder than the aortic second sound of the heart under observation. This accentuation of the pulmonic second sound is of great importance in the diagnosis of mitral stenosis, as it is always present if the lesion is of any importance.

I have spent considerable time on the diagnosis of this lesion, because, as far as my observation goes, it is more frequently overlooked than any other, and because, furthermore, it oftener than any other valvular lesion exists without the presence of any murmur. If careful attention is paid to what I have already said, it will not be necessary to hear a murmur in order to diagnosticate the lesion. The constant pulmonary congestion, dyspnœa on slight exertion, hæmoptysis, the small and frequent pulse, the epigastric pulsation, the engorgement of the systemic veins, and the accentuation of the second sound, as heard over the pulmonary artery, make the diagnosis plain.

But we must, as in the other valvular troubles, endeavor to determine the extent of the lesion. This is indicated by the amount of interference with the circulation, both pulmonary and systemic. The estimation is at the best a somewhat rough one, but still, if we carefully weigh the evidence, we shall not go far astray.

The amount of interference with the pulmonary circulation is ascertained by observing the dyspnœa, the cyanosis, and the tendency to hæmoptysis. In well-marked stenosis spitting of blood is a very common symptom. Then the degree of accentuation of the pulmonic second sound and the presence of palpable pulsation in the second intercostal space are to be noticed. The latter, if the lung is not retracted, is significant of a high degree of pressure in the pulmonary system.

Besides these, we should take note of the amount of epigastric pulsation, as indicative of the degree of hypertrophy and dilatation of the right heart. When the right auricle is excessively dilated, it may sometimes be felt pulsating at the right side of the sternum, usually in the third intercostal space. This is a very evil omen. Tumefaction of the abdomen and dropsy, as well as the signs just mentioned, indicate the occurrence of dilatation of the right heart. This may result from a moderate stenosis of very long standing, or from a more marked case of shorter duration. The radial pulse gives us important information as to the state of the valve. If it is very small, and there is good reason to believe that the arteries are not abnormally diminutive, it indicates either considerable stenosis or a reduction of the volume of blood. The differentiation can be made by a study of the other signs.

From this incomplete review of the symptoms and signs of mitral stenosis we will proceed to the diagnosis of mitral incompetency.

When the mitral valve ceases to perform its function, as a result of some disease which has either deformed the leaflets themselves, given rise to a pathological condition of the tendinous cords or papillary muscles, or resulted in a dilatation of the auriculo-ventricular opening, we have yet another series of phenomena, differing considerably from those which accompany mitral stenosis, but having some points in common with them. The mechanical difficulty is that, when the ventricle contracts, the incompetent mitral valve, which should completely close the orifice, so that all the blood from the ventricle must enter the aorta, allows a certain amount of that blood to return into the auricle whence it came. This regurgitating blood, meeting that which is being at the same time discharged from the pulmonary veins, causes an over-accumulation in the auricle, which is dilated to an extent varying according to the amount of leakage and the muscular tone of the auricle. When the ventricle relaxes during the diastole, this large quantity of blood, held under increased pressure in the auricle, is poured rapidly into the ventricular cavity, which is in its turn over-distended. To get rid of the extra quantity of blood, propelling the greater part of it into the aorta and a lesser quantity backward into the auricle, renders an increased amount of work on the part of the ventricle necessary, and this extra labor induces a thickening or hypertrophy of its muscular walls. The effects upon the pulmonary vessels and right heart are the same as those resulting from mitral stenosis, only they are not so intense and develop more slowly. The quantity of blood in the systemic arteries is also diminished, and the pulse small, frequent, and weak, as in stenosis; but these signs are not so well marked as in the latter condition.

The physical signs differ from those of stenosis in that the left ventricle is hypertrophied, the pressure is not so great in the pulmonary system, and the abnormal bruit is synchronous with the apex-beat. The apex is displaced downward and outward, the pulsations of the pulmonary artery and left auricle are not felt in the left second intercostal space, and the valvular murmur is heard with the systole of the ventricle, and is audible not only in the præcordia, but also, if the case is a typical one, in the axillary and scapular regions. It is a curious circumstance that, while the murmur of mitral obstruction is frequently louder and harsher than that of regurgitation, it is heard in a much more circumscribed area. The wide diffusion of the regurgitant bruit is probably due to several different mechanical causes. In the first place, the valve during the systole is thrown into rapid vibration by the regurgitant current or eddy. These vibrations are propagated to the musculo-fibrous ring and to the papillary muscles, thus giving rise to a tremor of the entire ventricle, instead of to one of the anterior wall, as in stenosis. Then the sound, being higher in pitch and of greater volume, is conducted farther from its point of departure, and, finally, as the thickened ventricle presses backward toward the vertebral bodies, these take up the vibrations and transmit them backward and outward along the transverse processes and ribs.

The accentuation of the pulmonary second sound in mitral regurgitation, though present when the lesion is important, is not so well marked as in stenosis. Neither is the tendency to hæmoptysis so great, though those suffering from regurgitation are always short-breathed and liable to attacks of bronchial catarrh.

From this hasty consideration of the diagnostic signs of the single, uncomplicated valvular lesions, we must now pass to the study of their combinations and to the general principles of prognosis in valvular disease.

Aortic stenosis is very prone to be associated with regurgitation, as the deformity of the valves which leads to a narrowing of the orifice will be very likely, also, to interfere with their perfect closure. It is more common, I believe, for regurgitation to exist uncomplicated by stenosis. This occurs in cases of dilatation of the aorta, either the simple tubular form in old people, or from extensive atheroma, or in aneurysms of the sinus of Valsalva.

It may also result from rupture of the valve. The coexistence of the two lesions is easily diagnosticated by the presence of the two murmurs, systolic and diastolic, the former propagated into the arteries, the latter downward, toward the ensiform appendix. The characteristic hypertrophy is also present.

Mitral stenosis and regurgitation are often associated; in fact, it would seem to be somewhat doubtful if stenosis ever can exist without some regurgitation.

Certainly, what is known as the button-hole contraction must be accompanied by incompetency, for the deformity is such that the valve can but leak. Regurgitation at the mitral orifice, however, very frequently occurs without any narrowing—the so-called "functional regurgitation" and that which is due to contraction of the tendinous cords and papillary muscles. When regurgitation is present it is not always easy to say whether there is a co-existent stenosis or not, for the secondary effects of the former are calculated to obscure those of the latter. That important sign of obstruction, the non-hypertrophy of the left ventricle, is, of course, absent, and the signs connected with the systemic and pulmonary circulations are so nearly alike as to be accounted for by either lesion, except that in stenosis the accentuation of the pulmonary second sound is greater, and the radial pulse is smaller. Dr. Broadbent, in a recent article in the "American Journal of the Medical Sciences," has stated that in mitral stenosis the radial artery is contracted, and, though the pulse is small, it is somewhat hard (like that of peritonitis). I have not noted this point in the cases which I have examined heretofore, but I shall pay particular attention to it in the future. If the presystolic bruit is present, it decides the question; but a certain amount of skill is requisite to separate the systolic and presystolic sounds, when they co-exist, and, besides, when the regurgitation is very well marked, the murmur of stenosis is not usually typical. Some assistance may be derived from the fact that in mitral stenosis we often hear a reduplication of the second sound of the heart; but there are so many other causes of it that it is not very valuable as a diagnostic sign. The co-existence of mitral and aortic disease is very common. The orifices are so near that extension of inflammation from one to the other might easily occur, or, what is more probable, they might both be simultaneously affected.

The diagnosis of their presence is readily made by the signs already described. Their relative importance is determined by the preponderance of one set of symptoms or the other. For example, supposing the co-existence of aortic stenosis and mitral regurgitation or stenosis; if the ventricle were very much hypertrophied and the apex carried far downward, with only moderate epigastric pulsation, and if the pulse were full and strong, we should say that the aortic disease predominated. If, on the other hand, the heart were more square, the pulse small, and the tendency to pulmonary congestion and cyanosis well marked, we should expect to find the greatest trouble at the mitral orifice. It is sometimes important, from a prognostic point of view, to estimate in this way, as nearly as possible, the exact condition of the heart.

The prognosis in valvular disease, as in other structural affections of the heart, is very uncertain. There are, however, some indications which are of value in determining the gravity in a given case. First of all, it is important to estimate the extent of the lesion; and the means of doing this I have already indicated. As an illustration of the value of a correct solution of this question, I may say that, although aortic regurgitation is regarded by most observers as the most fatal of the valvular lesions, yet, when it is only slight, and especially in children, it may be almost innocuous, and improvement may even occur with the growth of the patient. I recall, at this moment, a case of simple aortic regurgitation in a little girl twelve years old which has, within the last year and a half, actually improved.

Many other such instances of the various forms of valvular disease have been seen, by all observers in this field, in which the *status quo* has been maintained for years, or the advance of the disease has been very slow. I think it is impossible, as a general rule, to say, directly after an acute rheumatic endocarditis, how much damage has been done. Some signs will clear up and others get worse, so that it will be necessary to wait a few months before we can estimate the chances of the patient. Not much prognostic value attaches to a knowledge of the exact site and nature of the lesion. While it is probably true that, as a very general rule, aortic regurgitation is the most dangerous, and aortic obstruction the least so, of all the valvular affections, still, in considering individual cases of cardiac disease, we can not place much reliance upon this. The important point, after all, is to ascertain, as nearly as possible, the extent of the lesion, for a slight aortic regurgitation, as in the case just alluded to, may be much less serious than a tight aortic stenosis. Another important question, the answer to which will very materially affect the prognosis, is, What is the cause of the valvular lesion?

When valvulitis occurs in young subjects, if it is recognized at an early date and a proper regimen adopted, the disease may remain stationary for many years, or even undergo some improvement, provided the original cause is not again brought to bear upon the disabled heart.

The prognosis will, therefore, be better if the endocarditis results from one of the acute infectious diseases—scarlatina, for instance—than if it is of rheumatic origin, because the rheumatism has always a tendency to recur.

When valvular disease is caused by rheumatism, the prognosis depends largely upon our ability to prevent a recurrence of the disease, for at every attack the heart is liable to suffer additional damage. On this account it is always advisable to keep track of such patients, seeing them occasionally, regulating their diet and mode of life, and warning them of the necessity for immediate attention to even slight ailments. Those who will be guided by the physician in this respect may save themselves much suffering and prolong their lives very materially.

Aortic disease, resulting, as it so often does, from arterial strain, does not promise so well. When the case is seen, considerable damage has already been done, degenerative changes may have occurred in the aorta itself, and the tendency is to progress. But here, too, much will depend upon the ability of the patient to so regulate his life as to avoid any further dangerous exertion and on his willingness to be guided by his medical adviser. Much, therefore, depends upon the social condition of the patient.

If he is a laboring man and can not give up his employment, the outlook is bad. Many lives are sacrificed to the stress of circumstances. Poverty is also a double misfortune in these cases, because it not only makes work imperative, but it limits the means for procuring proper clothing, diet, and household comforts. The prognosis of cardiac disease is always worse with those who are very poor than with those who are in more comfortable circumstances.

When valvular disease occurs in those who are subject to the gouty diathesis, the prognosis will depend largely upon the diagnosis and proper treatment of that condition. When it results from chronic Bright's disease, the outlook is gloomy in the extreme. It adds another burden to the already embarrassed circulation and nutrition; another factor to the complex of morbid processes which is slowly but surely dragging the sufferer to the grave.

When disease of the valves of the heart complicates chronic pulmonary disorders, the fatal issue will come more quickly than if either disease exists by itself.

Probably the most important element in determining the prognosis in valvular disease, next to the extent of the lesion, when that can be made out, is the condition of the cardiac muscle. This has been particularly insisted upon by Dr. Fothergill, and it is a point the consideration of which should always enter into the diagnosis of cardiac lesions. When obstruction or regurgitation occurs at any of the orifices of the heart, the muscular walls, under the stimulus of increased work, begin to increase in size and strength.

If the lesion is not too extensive and does not progress, these cardiac muscles soon become strong enough to overcome the difficulty, and the circulation is carried on efficiently.

If the trouble is at the aortic orifice, the left ventricle grows till it is able to overcome the difficulty; in fact, its size increases coetaneously with the development of the lesion. If the mitral valve is incompetent, the left ventricle again undergoes hypertrophy up to the point where it can perform the increased amount of work demanded of it; and the left auricle, becoming stronger, resists the reflux of blood during the systole, and maintains the onward current. It is probable that a slight amount of valvular disease might exist for a long time without any hypertrophy if the patient should keep very quiet, for we know that every properly developed organ is capable of doing much more work than is ordinarily required of it. But, as the patients do not keep quiet during the early stages of their disease, and as the tendency is generally to progress, hypertrophy soon occurs.

If the incompetency or stenosis continues to increase, or if the subject is very active, there comes a time when the capacity for hypertrophy has reached its limit, and continued overwork is followed by weakness and degeneration, in accordance with the general biological law that increased exercise of any organ acts as a stimulus to growth up to a certain point; but, that point being passed, the tendency is to degenerate. The degeneration of the heart muscle is accompanied by dilatation of the cavities and all the terminal phenomena of cardiac disease. If the compensatory hypertrophy is sufficient, and the case manageable, the prognosis is favorable. But if there is excessive hypertrophy or dilatation, with degeneration, the end is rapidly approaching.

The condition of the cardiac muscle may be pretty accurately determined by observing the efficiency with which the circulation is being carried on. If the patient is free from alarming symptoms, if the pulse is good, the systemic circulation not much impaired, and there is no anasarca or cyanosis, the compensation is sufficient. There may, however, be temporary disturbances brought about by causes which increase the labor of the heart, and so destroy the circulatory equilibrium. For instance, in a case of mitral disease in which the heart is carrying on the circulation, but without much reserve force, a severe cold, resulting in pulmonary congestion, may add sufficient to the disturbance which already exists to produce the most dangerous or even fatal results.

The occurrence of acute diseases, particularly in mitral disease, is always fraught with the gravest danger. Even attacks of indigestion by deranging the action of the heart may embarrass it to such a degree as to involve the most serious consequences.

Among other causes I have seen pregnancy result in a fatal pulmonary congestion and œdema in a woman with mitral stenosis, whose compensation had been so good that the disease had never been diagnosticated.

Much more might be said upon this subject, but the most important principles have been pointed out, and enough said to make clear the importance of a thorough, exhaustive diagnosis in cases of valvular disease of the heart. It has been well said that it is one thing to ascertain the existence of a lesion at one of the cardiac orifices, but quite another to determine its full significance.

In my next lecture I shall consider the treatment of valvular disease.

Original Communications.

THE INTRA-AXIAL COURSE OF THE AUDITORY TRACT.

By E. C. SPITZKA, M. D.

Step by step investigators are unraveling the fiber-labyrinth of the brain. Where the microtome fails us, there clinical observation of the effect of focal lesions and of secondary degenerations supplements our knowledge; and, where both lines of research leave us in the dark, the atrophy method introduced by the lamented von Gudden takes up the thread. The exactitude of this method is such that a single result obtained by its use outweighs in reliability the observations made by all the other methods albeit cumulative. The only one which approaches it may be regarded as a pathological imitation of the results of the atrophy method: the study of the secondary degenerations.

There is another means of determining the function of nerve-centers and nerve-tracts. It is the comparison of their relative development in animals having exalted or rudimentary special functions. In a crude way this method was followed by Burdach, Gratiolet, Solly, and the older writers. It was somewhat elaborated by Meynert in connection with his projection theory. But only a minimal part of his published results in this field has been sustained by more recent and thorough investigators. It was Gudden again who, with his distinguished pupil, Forel, discovered a number of interesting and valuable facts by the study of animals possessing rudimentary eyes, such as the mole and the blind rat of Palestine. There are other animals which constitute, as it were, natural atrophy or hypertrophy experiments. One of the most instructive cases is that of the porpoise and dolphin; indeed, the *Cetacea* generally. Years ago I directed attention to this fact.* The whales, dolphins, and porpoises have no functional hind limbs; in addition they have, relatively speaking, the largest auditory nerves in the animal kingdom. I was in a position to show that they have no pyramid tract,† and, by a number of comparisons with other species, derived the conclusion that this tract keeps pace in the animal kingdom with the extent to which intelligent and skillful control of the digits and the distal segments of the extremities is developed.

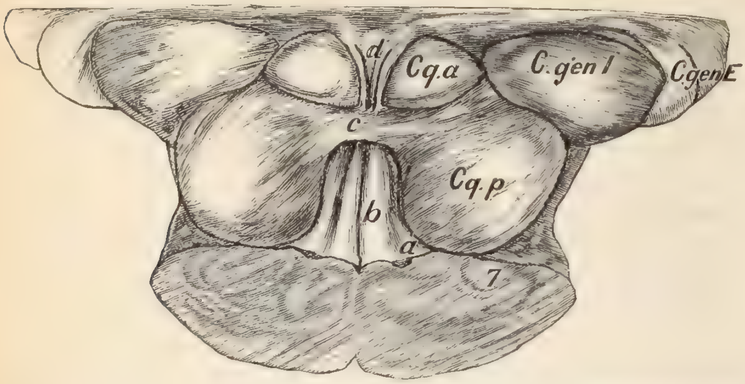

FIG. 1.—Dorsal face of mesencephalic segment of the brain-isthmus of *Tursiops tursio*, a dolphin. *Cq.a*, anterior pair of the corpora quadrigemina; *Cq.p*, posterior pair of same; *C.gen I*, right internal geniculate body; *C.gen E*, right external geniculate body; *a*, peculiar elevation corresponding to tract 6 of Fig. 2.

The brain-isthmus, the great general conduit through which the tracts of various function are conveyed to the brain proper, is very much simplified in its anatomy by the absence of the pyramid tract, and the atrophied state of the posterior columns of the spinal cord.‡ This involves a corresponding reduction of their cephalic prolongations. It is this very simplification which throws into enormous relief certain other tracts and ganglia, which are found in corresponding development in no other animal, nor even in man. Among these are the nuclei, roots, and tracts connected with the auditory nerve. The trunk of this nerve is larger than one half of the lumbar spinal cord; both nerves together nearly equal the trans-section area of the spinal cord at its upper portion.* We are consequently able to study the influence of auditory hypertrophy on brain architecture in the cetacean group of animals better than in the seals.

On looking at the dorsal aspect of the brain-isthmus, we are struck by the enormous preponderance of the posterior corpora bigemina. Instead of corresponding to the anterior pair, as they do very nearly in all land animals who possess functional eyes, they represent four times as great an area in projection. In cubic dimensions this preponderance is vastly greater. The internal corpora geniculata, which keep step with the posterior pair in the animal scale, are correspondingly prominent, occupying nearly the entire area of the posterior face of the thalamic region (Fig. 2). In some species (individuals?) they are flat, in others they appear more rounded; but in area they exceed the external corpora geniculata as much as the posterior pair of the corpora quadrigemina exceeds the anterior. This relation

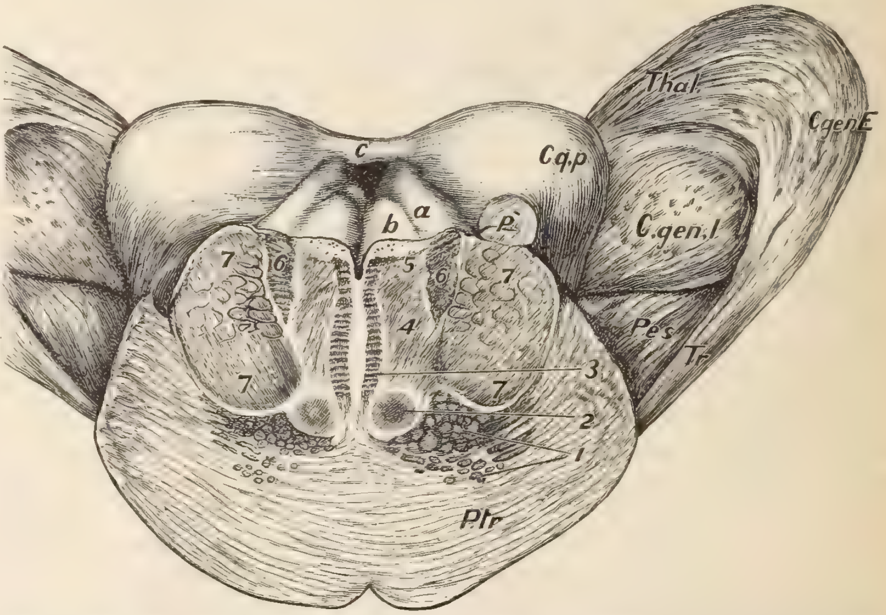

FIG. 2.—Posterior face of mesencephalon and thalamic region of *Tursiops tursio*. The details of the surface, exposed by cutting the posterior part of the pons away from the mesencephalic portion, are indicated by numerals and *Ptr*; the transverse pons fibers. This is the posterior aspect of the segment the dorsal face of which is shown in Fig. 1; *C.gen E* and *C.gen I*, the external and internal geniculate bodies; *Tr*, optic tract; *Cq.p*, posterior pair; *p'*, section of same, where the knife grazed it, showing fusion with 7, 7, the "auditory" division of the lemniscus; 6, *processus e cerebelli ad cerebrum*; 2, a tract corresponding in position to the "fascicle" from the pes to the tegmentum of Henle; 1, the beginning formation of the *pes* which is represented in the *Cetacea*.

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* "Chicago Medical Review," 1880; "American Journal of Neurology and Psychiatry," 1883, vol. ii, No. 4; "New York Medical Journal," September, 1881; "Alienist and Neurologist," July, 1885.

† This fact is referred to in several of the above publications, but not described in detail until the early part of this year in "The Comparative Anatomy of the Pyramid Tract." "Journal of Comparative Medicine and Surgery," January, 1886.

‡ "New York Medical Journal," September, 1881: "In the porpoise the posterior columns are in a natural atrophy, though the muscular sense of this animal must be exquisite." Guldberg ("Christiania Videnskabs-Selskabs Forhandlinger," 1885, No. 4) confirms this statement as to the atrophy of the posterior segment of the trans section of the cord.

* "Notes on the Anatomy of the Dolphin's Brain," "Journal of Comparative Medicine and Surgery," April, 1886. Both auditory nerves measure one hundred millimetres in square area, while the lumbar cord measures but eighty-five millimetres.

is repeated in the seals, only here the discrepancy between the two corpora bigemina is not so great, while the internal geniculate body constitutes a bolder prominence, if not fully as large a one as in the dolphin.

On making a section through the isthmus immediately behind the post-optic lobes, as in the figure, the details of the section appear so atypical that it becomes almost impossible on first sight to identify them. There is no pyramid tract in the pons, and that part of the lemniscus which is most prominent in man—the middle part—appears to be absent. The brachium conjunctivum (*processus e cerebello ad cerebrum*) appears crowded mesad by an enormous tract which corresponds to the lateral part of the human lemniscus. The continuation of the posterior commissure in the mesal division of the reticular field is very prettily seen. Of the inner division of the lemniscus, nothing is seen except the very distinct bundle from the pes to the tegmentum of Henle.

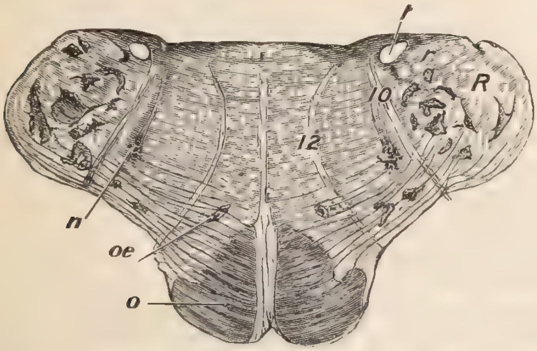

FIG. 3.—Section through middle of olive of *Tursiops tursio* (bottle-nosed dolphin). *o*, olive; *oe*, external olive; *t*, solitary bundle; R, restiform column; *n*, nucleus of laryngeal muscles.

In earlier years, when my series of sections was an imperfect one, I suspected that the great development of the fasciculus olivarius was related to the hypertrophy of the lateral division of the lemniscus. But, as is shown in Fig. 3, the olivary elevation in the porpoise is entirely ganglionic,* and nothing is more positive and clear than that the olivary nuclei are solely connected with the restiform column in this level. On supplying the gap in my series, I found the solution of the problem in the auditory nerve-root and the related trapezium. The trapezium is relatively the largest in the animal kingdom. In the cat it is as prominent a feature of the trans-section. But, the entire brain-isthmus being of a higher type in the porpoise, the real preponderance of the trapezium is so much greater in the marine animal. It is so massive that, notwithstanding the antero-posterior extent of the pons, the latter fails to conceal the trapezium entirely.† Its cells are very numerous and far larger than in man or other species. Now, the remarkable fact, plainly visible as in no other animal, is that the trapezium fibers can be seen massing into a longitudinal strand, which, followed up from section to section, is identified with a remarkably voluminous tract which occupies the situation of the lemniscus and passes into the posterior pair of the corpora quadrigemina. There is thus established a direct connection between the trapezium and the post-optic lobes through a part of the lemniscus. This, as I have shown in an experiment produced by the atrophy method, is not affected by removal of the cerebrum and thalamus even, or of the anterior pair of the corpora quadrigemina. It is the only part of the lemniscus which is not atrophied on the side where the cerebrum is destroyed.

Baginsky,* in part confirming the results of v. Monakow † and Onufrowicz,‡ found that, on extirpating the posterior or cochlear division of the auditory nerves, the same side of the trapezium, with its nucleus,# the *opposite lower lemniscus*, the opposite posterior tubercle of the corpora quadrigemina, and the opposite corpus geniculatum, underwent atrophy. Now, the case of the *Cetacea* supplements this observation, showing that while atrophy of the posterior division of the auditory nerve produces atrophy of these parts, hypertrophy of the former is associated with hypertrophy of the trapezium, the lateral (lower) part of the lemniscus, the posterior tubercles of the corpora quadrigemina, and the internal geniculate bodies. A clearer proof of the relations of all these parts to the function of hearing sound could not well be expected. But further evidence was furnished by Monakow, who followed up the thread of auditory transmission in that part of its course which is not covered by the experiments of Baginsky or the observations here offered. He found that destruction of the auditory field in the cerebral cortex (Hörsphäre) is followed by degeneration of the internal geniculate body. The course of sound, from its reception in the cochlea to the cortex of that intellectual center, the cerebral hemisphere, is as follows:

1. Cochlea		Atrophy observation: Baginsky.
2. Posterior division of eighth pair	Hypertrophy observation: Spitzka.	
3. Trapezium of same side; crosses		
4. Part of lemniscus		
5. Posterior pair of corpora quadrigemina.		
6. Internal geniculate body		
7. Corona radiata	Atrophy observation by von Monakow; experimental observation of Munk.	
8. Cortex of auditory field		

The nucleus of nerve-cells in the lower or lateral lemniscus is an enormous one in the *Cetacea*, and alone exceeds the area of the brachium conjunctivum (*Bindearm*). The cells are as large as those of certain motor nuclei.

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* To convert the cetacean medulla into the human, the olives would have to be separated by the interolivary layer, and the pyramids appended to this wedge below. These two tracts, representing the muscular sense and voluntary motor innervation of free prehensile extremities, are absent, or nearly so, in an animal which, with a high intelligence, has yet in its external form undergone a retrogression to the fish type.

† In the level of the nucleus of the trapezium (upper olive, which measures on each side one third by one quarter of an inch in section) the dorso-ventral depth of the trapezium exceeds the rest of the tegmentum, and the pons; it is pushed up to within a centimetre of the ventricular floor. The rhaphe exhibits a sort of reduplication of the fir-stem which it forms at the trapezial decussation between it and the dorsal part. The "secondary trapezium" thus formed is connected with a special group of cells mesad of the superior olive, and shaped like the scattered cell column found parallel to the ventral part of the raphe.

* Virchow's "Archiv," 1886, July 3d, vol. cv, p. 28.

† "Archiv für Psychiatrie," xii and xiv.

‡ *Ibidem*, xvi.

# Nucleus of the trapezium I proposed terming it seven years ago; it still passes under the misleading name of the "superior olive" in most anatomical writings.

This observation of the isolated hypertrophy of the auditory tracts and centers is in harmony with the fact that the cetacea possess a remarkably fine sense of hearing, as I have detailed elsewhere. The related hypertrophy of the inner geniculate body in the seal is equally associated with excellent auditory perception. The case of the latter animal, owing to its greater analogy of convolutional type to the dog and other carnivora on which experiments have mapped out the cortical field of hearing, permits us to assert the same hypertrophy of the cortical field of hearing as is found in the lower centers of both seal and dolphin. The cortical field is here so great that the horizontal ramus of the Sylvian fissure is actually crowded into a transverse direction by the former's exuberant development.

In addition to obligations to Professor True, of the Smithsonian Institution, whose admirable catalogue enabled me to identify the species I secured for this study, I must express my gratitude to Mr. Eugene Blackford, Commissioner of Fisheries, for aid kindly extended in obtaining the requisite material. This consisted of three species of our American *Cetacea*, besides two older and imperfect specimens derived from the New York Aquarium many years ago.

A CLINICAL REPORT OF CASES TREATED BY PNEUMATIC DIFFERENTIATION.*

By HERBERT F. WILLIAMS, M. D.

(*Continued from page 295.*)

Case XII.—Miss E., aged twenty; best weight 135, present 117; temperature 102°, p. m.; expansion 1½ inch; spirometer 30; is ignorant of any phthisical history; father and mother dead. One year ago took cold, from which did not recover. Has been under treatment, using spray, etc., since hoarseness commenced, which was an early symptom; at present voice is very husky, coughs constantly; expectorates yellow and greenish matter, sometimes mixed with blood; averages two cold sweats per week; very short of breath; percussion note is high-pitched in clavicular region of right lung; point of greatest intensity at junction of sternum; note is also high-pitched at outer clavicular angle of left side; auscultation gives a bronchial, harsh, and wavy respiration in upper anterior lobe of right lung; moist râles in profusion on coughing. There are sibilant and sticky râles below point of bronchial breathing; in the left lung the respiration has lost its vesicular element; there is also evidence of pleuritic attachment. Treatment began December 1, 1885, and continued every other day up to December 18th, taking in all ten applications; tincture of iodine sprayed; five to eight tenths rarefaction used. Patient professed improvement at the fifth application, and the respiratory sounds seemed clearer, but the cough, expectoration, and fever did not abate. On December 18th there was no substantial benefit noted, when I advised the suspension of the treatment. Two weeks later she was visited at her home; her lungs were congested, bronchial respiration was more marked than ever, and her fever had increased.

Whether the fever was increased by the use of this method or not, the coincidence at least was striking. There may be conditions where the accidental point of breaking down is in close proximity to the pulmonary lymphatic system, and any considerable force exercised, as in this case of six tenths rarefaction, would tend to more rapidly disseminate the particular virus into the general circulation, and thus more rapidly bring about the necessary conditions to infect the nervous centers that control bodily heat. This is a fair conclusion in this case, though it may be an incorrect one.

Case XIII.—Mrs. L., married, aged thirty-three; best weight 150, present 138½; temperature normal; expansion 1¾ inch; spirometer 150; no history of phthisis; had uterine trouble before marriage; a cough first developed shortly after the birth of a child, one year ago, which has never entirely disappeared; has recently recovered from a severe prostration consequent upon a hæmorrhage following a retained placenta of a three months' miscarriage; has been up and around for the last month; her general condition improving, but her cough growing more severe and expectoration increased; very anæmic, sallow; exertion produces dyspnœa; fremitus increased on right side anteriorly; percussion on right side reveals high-pitched note in clavicular spaces extending to fourth intercostal space. The note is not full in axillary region of left side. Auscultation, right lung; the respiratory sounds are feeble. Forced, they become bronchial with moist râles; in the left upper lobe in front the respiratory sounds are harsh and cog-wheeled in character. Treatment began December 10, 1885, and continued with great regularity up to January 26, 1886, taking in all thirty-one applications. Rarefaction from four to eight tenths. The agents used in this spray at different times include mercuric bichloride, carbolic acid, ammonium chloride, tincture of stramonium, cocaine, morphine, and iodine. A steam spray was used for a time instead of the compressed air-blast. Artificial respiration usually supplemented the sitting, which averaged from fifteen to twenty minutes in duration. My daily notes show various and conflicting statements, but no steady improvement is recorded. At times she would complain of sharp pleurodynia, and, strange to say, sought the cabinet for relief of this. The mornings after inhaling the iodine the sputum gave a blue reaction upon her handkerchiefs. Her weight, up to January 26th, had not declined, and her temperature remained normal, yet her cough continued, and the result of the treatment has been negative.

Case XIV.—(Referred by Dr. D. C. Dellenbaugh, of Cleveland, Ohio, who in his letter records a morning subnormal temperature and cites the case as a "typical example of phthisis following upon pneumonia, involving nearly the whole of the right lung"):

R. C., aged twenty-seven, single; best weight 138 pounds, present weight 120¼; no phthisical history; "cold one year ago"; confined to bed; coughed ever since; expectoration very free and heavy. For last six months night-sweats; coughs so violently that he vomits; can not take exercise without loss of breath, feeling very weak; abnormal blueness of face and hands, emaciated, deep temporal fossæ, retracting right chest almost a deformity; intercostal depression. On percussion of right anterior upper and outer angle, the note is woody in character; in the scapular region it is of higher pitch than on the corresponding side; the left supra-clavicular space fails in normal resonance.

Auscultation.—Cavernous respiration in right outer apex, extending toward the axillary border; large gurgles; inspiration accompanied with fine râles in mammary region; sputum contains bacilli. Began treatment January 25, 1886, and has continued up to April 17th, taking in all thirty treatments. Took treatment every day for first ten applications, gradually declining in frequency until finally he came once a week. The mercuric bichloride was used (1 to 500), varied at times with the iodine solution, to which eucalyptol was added. Examined April 17th; the cavity has become nearly quiescent; there are no moist râles in mammary region; he estimates the quantity of sputum at two thimblefuls a day; his weight is 127½ pounds.

CASE XV.—Sent by his physician, Dr. Guild, of Ware, Mass., who kindly appends the following history: Mr. G., aged forty, unmarried, temperate; one uncle afflicted with asthma; five or six years ago, after a succession of colds which were easily contracted, he complained of shortness of breath; suffered with hay fever from 1870 to 1879; after this and at the time of the beginning of the asthmatic seizures the hay fever did not appear; can not go near a stable without exciting an asthmatic attack; generally free from asthma while in New York. He is convinced that the locality of his native town (Ware, Mass.) is prejudicial to his case, which is strengthened by his uncle's experience, who could not reside in comfort at home. The physical signs show extreme resonance; auscultation shows absence of vesicular murmur with sibilant râles; heart-sounds heard with great difficulty. There are bronchial and some moist râles.

First treatment February 22d; rarefaction four tenths, with ammonium chloride, for the relief of the bronchial catarrh. The sitting ended by artificial respiration. For the last fifteen applications compression was carried to two inches in the cabinet and the patient allowed to expire into the normal air, inhaling the air of the cabinet. In this way he repeats this act ten to fifteen times a minute. He has taken twenty-eight applications in all; has increased his respiratory power; his heart-sounds are audible; has had no attack since commencing treatment; is now in Ware to determine the effect of the treatment.

CASE XVI.—T. F., aged thirty-nine, physician, gives the following history of his own case, and the benefit he derived from a few treatments with the pneumatic cabinet:

"Was attacked with acute pleurisy in July, 1883, slight effusion, etc., followed by cough and prostration, and was confined to the house until May, 1884; then began to improve rapidly, and, by the advice of my physicians, spent the summer in the Adirondacks, and the following winter in southern Georgia; again last summer went to the Adirondack lakes, and in the autumn resumed practice. As far as I know, my only trouble has been pleurisy with its sequels; family history very good; in April, 1884, my chest had contracted four inches (from 38 to 34 inches); weight reduced from 166 to 146 pounds.

"In December, 1885, at the suggestion of my physician, Dr. T. A. McBride, of New York, I applied to Dr. Williams to try the effect of 'pneumatic differentiation' upon my contracted chest. During the time from May, 1884, to December, 1885, my chest measurements only increased one inch, although my weight increased ten pounds; with this condition of my chest I had relatively limited expansion and accelerated respirations, with more or less pain constantly. I think I received in all ten treatments; at first two a week, later one only every week. The result of these treatments has been an improved respiratory mobility; respirations less rapid and deeper; am able to sleep equally well on either side (previous to my first visit I was unable to sleep on my left side), and almost entire freedom from pain in thorax.

"I think that the thorough expansion of the lungs by differentiation has been of great therapeutic benefit, and with the start this measure has given me I have been able to take a large amount of out-door exercise, and a steady improvement has resulted. Yours truly, T. S."

In these sixteen cases rational auxiliary treatment has not been withheld, nor has it been essentially different in any case from that which had been instituted before coming under my care. In most of the cases I have advised an occasional return for treatment, and an immediate return in the event of taking cold. While these results are largely due to the benefit of expansion and thorough blood aeration, and the consequent stimulation of appetite and assimilation, I think the undoubted influence of deeply introduced medicinal agents in some of the cases must claim a share of the credit.

I can not longer trespass by an extended reference to the remaining twenty-nine cases. Many of these would furnish data like those reported; while none can show a gain of thirty-two pounds, as in Case VII, none have as signally failed as Case XII.

In response to an invitation from me, many of those physicians using the cabinet have forwarded me reports and conclusions gained from their experience with it. With their permission I append them.

From Dr. Classon and Dr. Clarke, of Albany:

"We send you a report of one case in which we expect recovery by cabinet treatment. We expect favorable results in two other cases, but it is too early to say decidedly yet; improvement has followed in three others. G. L., aged nineteen, clerk; weight 139 pounds; single; one sister died of phthisis, aged eighteen; had a hæmorrhage one year ago, followed later by two slight ones accompanied by cough, loss of weight, and recently by night-sweats; expectoration mainly mucous.

"*Examination.*—Percussion; slight dullness over upper half of both lungs, extending a little farther down on right than left side; more marked on upper right side; increased resonance over lower part of both lungs.

"*Auscultation.*—Fine mucous râles over same portion of lungs as dullness; respiratory murmur diminished over upper half of both lungs, and exaggerated over remaining area. Broncho-vesicular respiration over circumscribed area in posterior upper half of right lung (infra-scapular region).

"*Treatment.*—After fourth treatment, began to improve; after sixth, marked improvement, coughing only in the morning; râles clearing up, dullness disappearing, and respiratory murmur becoming more distinct. At the end of the fortieth treatment the left lung was nearly normal; the right still gave the same sign, though less marked in the extreme upper portion—that is, in the supra-scapular region. The remainder of the lung was normal; respiration in the cabinet at first treatment twenty-seven, gradually decreasing to twelve at the seventh, to eight at the ninth, to six at the twelfth, to five at the twenty-second, to four at the twenty-fifth, and remained there up to the present time. Began at two tenths rarefaction, increasing to three tenths at the fourth, four tenths at the sixth, six tenths at the eighth, eight tenths at the twentieth, and the same throughout. Began with one treatment every other day, and kept that up for thirty-seven treatments; then dropped to one a week, and has continued that to the present.

"Treatment commenced November 2d; took the last April 10th. Diagnosis, acute phthisis.

"Yours respectfully,
"R. D. CLARKE,
"F. L. CLASSON."

Dr. W. Everett Smith, of Boston, who has had a cabinet since December, 1885, reports:

"I do not feel justified in reporting as absolutely cured more than this single case, which I send. But this one case is valuable to me, as showing what can be accomplished in treatment. I have others that might be reported, but they are not so striking, nor should I feel justified in speaking so positively in regard to them.

"J. M. E., clerk, aged thirty, has been troubled with asthma constantly for about fifteen years; has always been subject to colds. In the early winter of 1884 had pleurisy in left side; strength and weight so reduced that he had to give up work and spend the winter in the South; was examined at this time by Dr. J. P. Oliver, of Boston, who said he had tubercular phthisis; has never had hæmorrhage or night-sweats, but in December, 1885, when I first saw him, I found his daily work more than he had the strength to accomplish; slight cough and appetite; no bacilli; chest very flat and emaciated, with a marked tender area in right infra-clavicular space; respiratory act feeble; patient gets out of breath easily; percussion revealed slight dullness at both apices. Auscultation showed inspiratory murmur hesitating at both apices, with occasional slight râles; at the right apex in back were very distinct cracklings; there was an abnormal transmission of heart murmur in right subclavian artery; over the third interspace and about two inches from sternum were stridulous râles; vocal resonance not clear over chest, clearer at apices; expansion one inch; diagnosis, incipient consolidation at apices.

"The treatment has been chiefly in rarefied air, with oil of pine-needles, and later with a creasote and camphor mixture.

"First treatment December 24, 1885. Between this date and February 10th had eighteen treatments; has not been treated since March 15th; has had a total of twenty-three treatments. On April 19th I re-examined him, but can find absolutely no trace of dullness or abnormal respiratory murmur. Patient says he never felt or looked healthier in his life; has not hesitated to be out in all weather this winter, even in night air, a thing he has never been able to do before; has had only one cold, and that very slight; has had no asthma since January 14th, although he has several times run for the cars very hard. Does not easily get out of breath now; feels that he is stronger, daily work does not tire him; absolutely no cough, appetite hearty, chest thirty-one inches; but expansion the same; tender area in right infra-clavicular space absent.

"Yours very truly,
"W. Everett Smith."

Dr. C. B. Herrick, of Troy, N. Y., says:

"I will attempt, by the following remarks on a few of my cases of pulmonary troubles which I have treated with the pneumatic cabinet, to give you an idea of what I have done in that line and with what success. Upon receiving my cabinet, I, of course, tried it upon myself as well as on my students and others who had perfect respiratory organs. I found after a few trials, in which we could not breathe against more than four- or six-tenths pressure, that we were enabled easily to allow one inch to one inch and a half to be applied. This extra amount of air thrown into our lungs certainly filled us up, and all tight clothing had to be loosened, and acceleration of the heart's action was noticed and, perhaps with one-inch pressure, a redness of the face was apparent; but the more marked effect was the entire satisfaction of having plenty of air to breathe and no work to breathe it. This effect would continue for some time after coming out of the cabinet. Why, even in perfect health, this acceleration of the heart's action, caused as it is by the undue amount of air introduced into the lungs to be arterialized, its more ready arterialization, and with this all a general activity of all the functions of the body, would not this be a good general tonic, and, of course, a perfect immunity against permanent lung trouble? I think the time will come when people will take their treatment as they now do their Turkish and other baths, and the sooner the time comes the better. Now as to a few of my cases.

"Mr. Nathan M. is a machinist, aged forty-five, coming to me July 20, 1885, with the following history: His father died of phthisis; he contracted a cold some twelve months since, and had one slight hæmorrhage. His physical condition is very weak; weight, 120 pounds; respiration, 30 a minute, very short and labored. His expanded chest is thirty-two inches; ribs prominent; right chest revealed dull percussion throughout its upper half; remainder with left side normal. Auscultation shows a solid infiltration in the upper right lung; remainder and right side comparatively normal, save some bronchitis. He took his first treatment July 30, 1885, at a pressure of four tenths of an inch, using as spray iodine and iodide of potassium; his respirations while in the cabinet fell to eighteen a minute; and after ten minutes' treatment he expressed himself as being able to take a deeper breath than he had in three months; he continued with daily treatments under a gradually increased pressure, until at the sixth he had reached seven tenths; respiration outside of the cabinet was now twenty-two; could walk a long distance without winding. On August 30th, after ten treatments, a re-examination was made.

"A decided change in all the previous conditions; bronchitis absent; percussion dull over left area, more crepitant than mucous râles, showing conclusively a deeper penetration of air in the lungs. He continued daily and tri-weekly for forty-five treatments; his expansion gained one inch, and in weight twelve pounds. Is able to care for himself, and, although not cured, still gave up his treatment, and I have not seen him since.

"Mr. A. G. T., aged twenty-four, weight 128, father and grandfather died of phthisis. He has coughed two years, and has had two or three hæmorrhages. Physical condition fair; slight build. His symptoms have been raising of mucus, sometimes heavy, and with a daily evening fever. Examination shows chronic bronchitis everywhere, and a muffled murmur on the right side. Percussion obscure; diagnosis, incipient phthisis.

"First treatment July 15th, with two tenths rarefaction and with an iodine and iod. potass. spray; respiration fell two acts per minute while in the cabinet. After the fourth treatment the evening fever began to abate, and on the sixth day had entirely disappeared. His expectoration became more frothy and very easy to raise. He took daily treatments, creeping up to seven and eight tenths, using iodine, bichloride, ammonium hydrochlorate, tolu, etc., as sprays. At the expiration of fifty treatments his respiration was normal, weight increased five pounds, gained one inch in expansion, and is working harder than he ever did in his life before, and without any return of his bad symptoms. Has passed the winter north, while that of 1884 and 1885 had to be spent in Florida.

"Mrs. R., aged sixty-three; mother died of consumption; four maternal aunts died of the same disease. She contracted a cough twelve years ago, and coughed until five years ago, when she had an attack of pneumonitis; since then has been raising very little solid sputa, and been reduced in weight and strength until she is a shadow; has had a number of hæmorrhages.

"Six months since she had a second attack of pneumonitis which laid her very low, and from which she had never recovered. I saw her during July. At this time the following condition was present:

"The upper lobe of right lung was solid on percussion, and on auscultation devoid of air. The lower lobes had râles of every conceivable nature present; the left side was filled with bronchial râles and evidences of infiltration; inspiration was jerky and accompanied with audible sound; respiration was thirty per minute; her condition was very feeble; coughed hard; expectoration heavy, muco-purulent, with some blood. The first treatment was given her September 1st, with one tenth rarefaction; iodine was used for ten minutes; respiration fell to twenty per minute; daily and bi-daily treatments were kept up, she being very plucky, and breathing gradually up to six and seven tenths; remaining in the cabinet for from fifteen to thirty minutes. The medication was iodine, bichloride, ammonium hydrochlorate, and tolu; respiration in the cabinet was now, after fifteen treatments, sixteen a minute. In all she took sixty-five treatments, and examination showed an entire absence of râles in the left lung, while those in the right were confined chiefly to the upper lobe. Septum is entirely frothy, no lumps, and diminished in quantity; she is 100 per cent. improved; can walk in the open air unassisted, and has gained five pounds; in expansion she has gained one inch. She left for her home in the country, and has remained in as good condition as when leaving off her treatments. This case especially speaks well for the cabinet. From a mere skeleton, a dying consumptive, she has been brought to look almost the picture of health, is able to care for herself and others as well, and all in a person of her advanced age, and with such a history behind her.

"Miss T., aged twenty-six, came to me, December 21st, with the following condition: A history of pneumonitis from which she never fully recovered; evidence of it yet in upper lobe of right lung. I diagnosticated unresolved pneumonitis.

"This patient began with two tenths pressure and ten minutes at a time. She attained in five treatments a pressure of six tenths, and remained thirty minutes in the cabinet. She improved greatly in breathing and all her pulmonary symptoms, and after fifteen treatments she left me, being greatly improved.

"Besides these special cases I have had a number of others which have responded kindly to the influence of the differentiating process, and who were relieved by treatment. Some were in the last stages of phthisis, but the relief obtained was so great that they would come for treatment until physically unable. In all I have been more than pleased with the effect of this truly remarkable scientific apparatus for the treatment of our most formidable disease, phthisis.

"Very respectfully yours,

"C. B. Herrick."

Dr. W. A. De Watteville, of New York, writes as follows:

"It would be desirable that reports of cases should be more objective in character than is usually the case. Instead of piling up statistics of cases which have been under my care, I prefer to lay before you three types of pulmonary pathological conditions, distinct in regard to their symptoms, and to note the changes produced by pneumo-differential treatment.

"Great accuracy in statement, both as to primary diagnosis and to final results, is necessary, for the primary diagnosis is not so simple as to be free from possible error, and the enthusiastic compiler of his own cases is sometimes apt to make a mountain out of a mole-hill, and record the recovery of a so-called primary infiltration, which, if only a simple catarrh, would have recovered with a week's warm weather and a little cough mixture. If this is not so, how can we explain the wonderful results which appear so often in our journals whenever a new plan for the treatment of phthisis is described? I shall, therefore, detail three cases which, I believe, are fairly representative of their type:

"Case I.—Miss A. G., aged twenty-six, school-teacher, French nationality, has been in this country for three years; parents both dead, but no phthisical history; had to take a situation as teacher of French in a fashionable school. During the fall of 1884 was exposed to some hardship by overwork and cold room; developed late in the fall a chronic cold; cough; yellow expectoration; loss of appetite; evening fever; loss of flesh and voice; general weakness. Her weight declined from 128 to 98 pounds. She held on to her position until the end of the winter session, and then came to New York to visit friends, and, as she said, to die in peace. She was sent to me to give an opinion as to her chances by pneumatic treatment.

"*Examination.*—Weight 98 pounds, general emaciation, breathing labored, complexion pallid, eyes surrounded by dark rings, temperature 99° to 101°, and pulse feeble.

"*Inspection.*—Expansion, two inches and a half—right side, one inch and three quarters; left side, three quarters of an inch. A distinct hollow under left clavicle; respiratory movement on left side very limited; right side slightly defective; general nutrition and appetite exceedingly poor. Percussion note fair on right side, dull on upper third of left side, with exception of a circumscribed space below clavicle, where it is super-resonant, and changes its note on changing the position of the mouth.

"*Auscultation.*—Fine râles and rhonchi on right side, with more or less bronchial breathing; on left side the same symptoms more pronounced; on upper third, expiratory sounds are weak; loud bronchial breathing in apex, with cavernous sounds and gurgling râles under the clavicle. Posteriorly the same symptoms are less distinct.

"Treatment was begun on June 3d, and was repeated daily when the weather permitted it; internal medication was discontinued. The patient was ordered a bottle of Dublin stout at dinner-time. June 10th, objective signs not much changed, a somewhat freer expansion being noticed; voice slightly improved. June 17th, is able to sleep on her back; coughing much diminished, free yellow expectoration, appetite increasing, and night-sweats absent. Râles are coarser in character, and often accompanied with sibilant râles. The respiratory sounds are considerably increased. June 21st, patient had to visit her dressmaker to have her dresses enlarged over shoulders and chest; voice much improved. Is able to take walks and make visits. June 28th, patient can not take treatment on account of heat; appetite not satisfactory; more cough at night and during forenoon. July 5th, treatment has been omitted during heated term; complains of her right side, and can not sleep on it. Appetite not satisfactory.

"Ordered tannate of quinine in five-grain doses three times daily. July 14th, was called to Brooklyn to see patient; she suffered great pain on right side; pulse high, temperature 101°; find that dry pleurisy has developed over lower half of lung; the patient had that part of the thorax strapped with belladonna strips. July 24th, patient has resumed treatment and feels much better; appetite good. July 31st, improving rapidly; gaining weight fast; appetite excellent; sleeps comfortably on both sides; hardly any cough; voice strong; throat not sore at all; ordered to come bi-weekly. August 14th, continued improvement; râles, with the exception of the space under clavicle, are absent. No difficulty in breathing. Patient leaves to return to her duties in school; her weight is 112, a gain of 14 pounds. November 4th, patient has come to New York on a visit; she is in excellent health; when very tired, she coughs occasionally, and her voice becomes hoarse. She teaches eight hours daily; her weight is 130, general health excellent, appetite as great as ever. Auscultation still yields the bronchial and cavernous breathing under the clavicle. The heart-sounds are heard still, with equal distinction in the right axilla; a few coarse râles are occasionally met with; there is still the evidence of pulmonary lesion, but the patient is satisfied. March 10th, the patient visits at rare intervals; has followed her onerous duties during the winter, and feels stronger than she has for three years.

"Case II.—Miss A. B., aged seventeen; weight 120. Examined September 11, 1886. Father died of phthisis. Had pleuropneumonia (?) six months ago, and has never felt well since; cough, fever, and night-sweats; no hæmorrhage; loss of appetite and flesh. Was sent into the mountains of New Jersey without benefit. Yellow expectoration; temperature 102° or 103° in the afternoon. Florid complexion; no emaciation in face; thorax emaciated; clavicles prominent, scapulæ also; respiration is limited and almost entirely confined to lower thorax and abdomen; the upper part of thorax is almost immovable.

"*Percussion:* The note in the supra- and infra-clavicular and scapular regions is wanting in resonance and is high in pitch; no region of absolute dullness can be found, however. Auscultation shows sharp bronchial breathing, with undulatory expiration present at both apices. Fine crepitant râles accompany the end of inspiration and during the whole of expiration. These symptoms diminish as you descend the thorax; the breathing in upper half on both sides lacks the vesicular character.

"Treatment was commenced September 11th and given four times until the 15th. It was then discontinued for ten days on account of hot weather; was then resumed and continued three times a week until middle of October, when she left for home. The inhalations used were iodine, sublimate, chloride of ammonium, and salicylic-acid emulsion. The patient made very little progress during the twelve first treatments, and her condition was discouraging. A rarefaction of nine tenths inch was given, when she suddenly began to breathe fully with her upper thorax. From this day steady improvement commenced and continued. State of health at period of dismissal: Free thoracic breathing; bronchial breathing still present, but vesicular element more prominent; râles absent, and expectorates very little; no fever; appetite good; increase in weight not measured, but considerable. Present state of health, as reported last week, is excellent.

"Case III.—Mr. A. P., a transitory resident in New York city, has been sent on a sea voyage for the benefit of his health; aged thirty-three; phthisical history on his maternal side. Had a severe hæmorrhage three years ago and was sent to Corsica; has been getting progressively worse; May 24th, he shows absolute weakness, unable to mount a stair, harassing cough; sputa thick, yellow, and streaked with blood; temperature 102–103° in the afternoon.

"*Examination.*—Great emaciation; hectic; cheek-bones, clavicles, and scapulæ prominent; on right side great depression in infra-clavicular spaces. Percussion-dullness in the apex on both sides; under clavicle there is cavernous resonance. Percussion was painful and had to be abandoned.

"*Auscultation.*—Râles of every character are present. Gurgling sounds accompany cavernous breathing in right infra-clavicular space; treatment was administered with great caution, sublimate and pine-needle oil being used. This was continued for six times at a rarefaction of four tenths inch. Patient derived a momentary benefit as his respiration became easier and the expectoration free. Treatment had, however, to be discontinued, as his temperature rose to 105° every evening of the day he had taken treatment, notwithstanding quinine was used in liberal doses. On discontinuance of treatment, the temperature went down to 101°; patient left for the south of Europe, where he died a few weeks after his arrival. I mention this case as a corroboration of what I believe you have already published, that not only did the use of the cabinet in this case not reduce the temperature, but gave some cause of inference that the greatly induced circulation produced an increased temperature. "Truly,

"W. A. De Watteville."

REPORT OF EIGHT CASES OF INTUBATION OF THE LARYNX FOR CROUP

(O'DWYER'S METHOD).

By WILLIAM P. NORTHRUP, M. D.,
PATHOLOGIST TO THE NEW YORK FOUNDLING ASYLUM.

In the following cases it has been the aim of the writer to have each patient examined by one or more physicians of recognized merit and position, who are prepared to vouch for the accuracy of this report:

Case I.—Gussie B., aged five years and a quarter, a sister of the one the report of whose case was published in this Journal for April 3, 1886, also a patient of Dr. R. N. Disbrow. Died.

April 18, 1886.—She awoke with croupy cough, and there was a diphtheritic exudate on both tonsils.

19th.—There were aphonia, croupy cough, croupy inspiration and expiration, the countenance was anxious and dusky, restlessness and recessions were extreme, and there was absence of vesicular breathing behind.

4th, P. M.—Dyspnœa was urgent, and a tube was inserted in presence of Dr. Disbrow. Relief was immediate and complete. Examination five minutes later showed vesicular breathing clear and low-pitched over both lungs behind, with a few crepitant râles at the base of the left lung. In five minutes more the patient slept quietly. Six hours later respiration was rhythmic, but varying in depth—first a deep breath, then shallow and shallower, then deep and deeper, and so on.

The urine showed albumin, hyaline, and granular casts. Pulse, 144; respiration, 61; temperature 103·4° in the rectum.

20th.—She slept much, and took milk reluctantly. Pulse, 144 to 168; respiration, 40 to 50; temperature, 103° to 103·4° in the rectum.

21st.—She was very restless during the night. Refused milk. Respirations were loud and noisy.

She died at 5 A. M. No autopsy was allowed. Cause of death, extension of diphtheritic process into bronchi.

The tube was removed after death, and found perfectly clear.

Case II.—Mamie B., aged five years, a patient of Dr. O'Brien. Recovered.

May 19, 1886.—There were epistaxis and croupy cough.

21st.—There was a diphtheritic exudate on both tonsils.

22d.—There were dyspnœa, croupy inspiration and expiration, restlessness, recessions, absence of vesicular breathing over both lungs behind. A tube was inserted, with immediate relief of dyspnœa. Vesicular breathing, low-pitched, was heard over both lungs; color clear; respiration easy and quiet. Five hours later she had slept several hours, and had taken milk freely, with little coughing. Pulse, 140; temperature, 100·5° in the rectum.

Albuminuria was present.

25th.—The pharynx was clear of exudate. She slept well, and coughed moderately.

27th.—The tube was removed, after having been in five full days.

Fifteen days later she talked and sung, and seemed quite well.

Case III.—Charles L., aged three years and nine months, patient of Dr. Saunders.

May 17, 1886.—He was hoarse, had a croupy cough, and there was a diphtheritic exudate on both tonsils.

19th.—Tonsils clear.

22d.—Inspiration and respiration croupy. There were marked restlessness and recessions. Pulse weak and lost at the wrist at the moment of inspiration. Temperature, 98·5°. Dyspnœa urgent. A tube was inserted, with immediate relief.

23d.—Pulse, 164; respiration, 62; temperature, 100·6°.

At *3 P. M.* he coughed the tube out during a hard coughing paroxysm after taking milk. The tube was reinserted after three hours, in which time the dyspnœa had again become urgent.

8 P. M.—Pulse, intermittent, 128, while sleeping; respiration was 36.

24th, A. M.—Pulse, 128; respiration, 46; temperature, 102·5° in the axilla.

P. M.—Pulse, 140; respiration, 44; temperature, 103·8° in the axilla.

25th, A. M.—Pulse, 144; respiration, 48; temperature, 102° in the axilla.

P. M.—Pulse, 168; respiration, 54 to 64; temperature, 101° in the axilla.

26th.—He died at 4 A. M. from extension of membrane to the bronchi.

No autopsy. The tube on removal was found clear. The tube was in the larynx three days and a half.

Case IV.—Recovered. Willie W., aged three years and nine months, a patient of Dr. H. A. C. Anderson.

May 28th.—There was diphtheria of the pharynx.

June 1st.—There was croupy cough.

4th, A. M.—The child was very restless, tossing about; there were loud, harsh inspiration and expiration; marked recessions; the countenance was anxious, and the color dull, pale. There was a diphtheritic exudate on the tonsils. Dyspnœa became gradually very urgent, and vesicular breathing was absent or in the chest behind. A tube was inserted in the presence of Dr. Anderson. Relief was immediate and complete. After ten minutes the chest was again examined. Vesicular breathing was found to be clear, dry, and low-pitched. The child went to sleep quietly on lying down, with respiration inaudible at the foot of the bed. Pulse, 132; temperature, 100° in the axilla.

5th—Albuminuria was present.

6th.—The tube was coughed out forty hours after its insertion. The patient was seized with violent coughing while drinking. Dyspnœa was not urgent, but it was thought best to remain at hand through the night and await the result. It was not necessary to reinsert the tube.

Milk was swallowed easier after the removal of the tube.

7th.—The pharynx was clear of exudate.

12th.—Voice had returned strong and loud, though a trifle hoarse.

The child made a good recovery aside from an abscess below one ear. This case was watched by five physicians whose names appear sooner or later throughout the report.

Case V.—Died. Willie B., aged five years ten months, a patient of Dr. Elmer.

June 4th.—He was playing in the yard when he began to suffer from headache and fever.

6th.—Diphtheria of the pharynx was well marked.

9th.—There was croupy cough.

10th.—There were croupy inspiration and expiration.

He slept none last night, was restless, the dyspnœa gradually becoming more and more severe; there were marked recessions, and the respiratory murmur was absent over the whole of the chest behind. Respiration was loud, harsh, and croupy, and the pulse was rapid, feeble, and intermittent.

A tube was inserted in the presence of Dr. Elmer. Relief from dyspnœa was immediate and complete. He coughed moderately. Good vesicular breathing was heard over the whole of the chest behind, the pitch was low, and there were but few subcrepitant râles. In ten minutes the child lay on the bed and slept quietly for two hours. Nine hours after the insertion the pulse was 148, intermittent.

11th, 5 A. M.—Pulse, 136; respiration, 34; temperature, 102·5° in the rectum. Epistaxis and albuminuria were present.

10 A. M.—Pulse, 140; respiration, 44; coarse râles were heard at the root of the lungs.

12th.—Pulse, 140 to 152; respiration, 27 to 38; temperature, 103° in the rectum.

13th.—Pulse, 148 to 152; respiration, 54 to 58; temperature, 102·6° to 104° in the rectum.

The pulse was intermittent, the hands and feet were cold and clammy. During the day distinct bronchial breathing was developed at the base of the right lung.

14th.—Temperature, 105° in the rectum. He died with distinct signs of pneumonia. The tube was found clear on removal. There was no autopsy.

Case VI.—Died. Adna H., aged seven years, a patient of Dr. Bradshaw.

June 9th.—There was a well-marked exudate of diphtheria on the tonsils and velum.

10th.—There were croupy inspiration and expiration.

11th.—Dyspnœa was increasing gradually, and in the afternoon it was urgent, and there were marked recessions. There were a harsh, dry, croupy cough and respiration. The patient had been exceedingly restless for twenty-four hours. A tube was inserted in the presence of Dr. Bradshaw. The patient coughed severely and expelled much tenacious mucus, then fell into a quiet sleep. She took milk with very little difficulty.

8 P. M.—Pulse, 168; respiration, 32; temperature, 104° in the rectum. After a refreshing sleep she sat up and drank a cup of milk without difficulty, then suddenly dropped on the bed dead. There was no autopsy. Death resulted from heart failure. The tube was clear on removal. The pulse from the first was poor and stimulants were given freely.

Case VII.—Freddie B., aged five years. Died. The patient was seen with Dr. Macgregor.

June 10th.—He was feverish and there was a croupy cough.

12th.—There was a well-marked exudate over the tonsils rapidly spreading upon the walls of the pharynx. There were croupy inspiration and expiration. Pulse, 108 to 112; respiration, 28; temperature, 101·2° in the rectum. The pulse was regular and strong.

3 P. M.—There was an exudate on the tonsils, velum, and post-pharynx rapidly spreading. Dyspnœa was urgent, there were marked recessions and restlessness. Examination of the chest showed entire absence of vesicular breathing behind and no râles. A tube was inserted in the presence of Dr. Macgregor. Relief was immediate and complete. Sleep followed in ten minutes.

13th.—Pulse, 120 to 132; respiration, 32 to 36; temperature, 103·5° in the rectum. The patient was restless and refused milk; pulse intermittent. The exudate was still further extending, and the pharynx was very much swollen.

11 A. M.—Pulse, 140 to 148; respiration, 52 to 56; temperature, 103·5° in the rectum. There was no albuminuria.

1 P. M.—Respiration, 45; temperature, 104·8° in the rectum. Vesicular breathing was indistinct, and there were low-pitched subcrepitant râles.

8.30 P. M.—Respiration, 50; temperature, 105·2° in the rectum. There was no albuminuria.

The patient died apparently of the severity of the diphtheria. There was no stenosis and no pneumonia. No autopsy was made. The tube on removal was clear.

Case VIII.—Recovered. Robbie W., aged one year eleven months. Patient of Dr. Anderson, and a brother of the patient whose history is given in Case V.

The patient became hoarse the day on which Case V was operated on.

June 15th (eleven days later).—His hoarseness developed into dyspnœa; diphtheritic exudate appeared on the tonsils and uvula.

On June 15th the dyspnœa became more marked, slowly and gradually becoming severe, and at length urgent. Restlessness was extreme, there were marked recessions, and absence of vesicular breathing behind. A tube was inserted in the presence of Dr. Anderson and Dr. Bleything.

Dyspnœa was at once relieved and fully, vesicular breathing was restored, there were no râles, and the pitch was low.

In fifteen minutes the child was sleeping quietly.

16th.—He had slept all night and much of the preceding day. Pulse, 120; temperature, 100·4° in the rectum. Albuminuria was present.

His condition remained good for six days, when the tube was removed. The child made a good recovery without any complications.

Of nine patients operated on, four have recovered.

Of the four who recovered, all had diphtheritic exudate in the pharynx; all were suffocating from laryngeal stenosis; all had these symptoms: restlessness, recessions, absence of vesicular breathing behind, and albuminuria. Each patient was examined by two physicians, most of them by more than two, and one by six physicians.

Of those who died, two died of extension of the exudate into the finer bronchi—bronchial diphtheria—but died before pneumonia had developed.

One developed well-marked pneumonia.

One died of sudden heart failure.

One died of malignant diphtheria.

METHOD IN MEDICAL STUDY.

By CHARLES H. MAY, M. D.,

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Our medical colleges contain such a promiscuous mass of material from which physicians are to be made that advice as to *how to study* will, in the opinion of the writer, be appreciated by many, having met with a considerable number of students of medicine who have confessed that the greater part of their first session at college was consumed in mastering those methods which, once acquired, made study a pleasure to them, instead of up-hill work, as it had been at the commencement. To the A. B. or B. S., or to those who have had the proper general scientific framework which should be the groundwork upon which to build a special study, or to many such, the following remarks will seem matter of fact and old. However, not only do most of our medical colleges admit men without satisfying themselves that they possess even an ordinary grammar-school education, but it is equally evident that a considerable number of men graduate from good medical colleges who lack even a rudimentary knowledge of general educational branches. For instance, from letters recently received from graduates in medicine in relation to instruction in quizzes the following have been clipped: "I *except* (accept) your terms"; "I make you the following proposition: *me* to pay," etc.; "I have *did* more studying after graduation than ever before"; "am much *oblidge*"; "your *tearms.*" Yet reference shows all these men to have had their degrees from reputable colleges. These facts are deplorable, but none the less real. These cases have been cited to show that the following remarks to undergraduates will reach many who need them, though the writer does not wish to be understood as implying that they are intended only for such.

The requisites for proper medical study are good health, at least an average general educational training, method, and industry. Most men who have had much experience in the instruction of medical students will agree with the writer that undergraduates may be divided into three sets of men: First, those whose desire it is by work and perseverance to take a high rank in the profession—to occupy the "best seat in the house," so to speak; secondly, those who have perhaps equally high ambitions, but, from the possession of less talent, or, perhaps, other circumstances over which they have no control, are content to occupy less elevated positions; thirdly, the men who wish to "slip through" with as little expenditure of mental force as is possible; they regret that a diploma is necessary to practice medicine, but, this being the case, they accommodate themselves to the least amount of work necessary to reach the goal. Unfortunately, it must be admitted that even this third class often succeeds in procuring licenses to prey upon the public. We shall leave it out of consideration, however; it is well it represents a minority. But, since we can not recommend any method of securing a diploma "in an easy way," the following remarks do not apply to them.

During the first year at college the primary branches—physics, chemistry, physiology, and anatomy—will probably be all the student will be able to do justice to, especially since dissections will and should consume much of his time; possibly, should he have the opportunity, some work in the chemical and physiological laboratory and in the acquisition of a knowledge of the physical properties of drugs may be added. As a matter of fact, the first session is often neglected and much of the time wasted in acquiring an "unnecessarily deep" knowledge of the city, especially if it is the student's first visit.

During the second year the branches mentioned should be continued, and, in addition, the four chief final branches—practice of medicine, surgery, obstetrics, and materia medica and therapeutics—should be taken up. It is only during the latter part of the second session that clinics will be of value, unless the student has read practice, surgery, and materia medica during the preceding summer months. In the selection of clinics the time left after proper reading must be taken into consideration, and in the choice of clinics general medicine and surgery should have the most attention.

During the third year physics and chemistry may be dropped, but all the other branches retained, and, in addition, the special subjects—eye, ear, throat, children, women, nervous, venereal, and skin—should receive as much attention as the other branches will permit. It is in these special studies that the four years' course accomplishes so much good; it is almost impossible to crowd them into the third year and yet do justice to the fundamental branches. The tendency to increase the period of medical study in this country is already felt, and is very gratifying.

At the close of the second year the student should endeavor to obtain the position of substitute in some hospital; during the summer months many such opportunities present themselves. This brings up the question, Should medical students work during the summer? In the great majority of cases a reasonable amount of work, less than in winter—say six hours—should be indulged in, reserving the last month previous to the reopening of college for complete rest and thorough recuperation. Most medical students do no reading during the summer, and thus make the winter's work all the more difficult. Such idleness during vacation is, in many cases, essential to health, owing to the student having become fagged out by injudiciously hard work during the winter. But such results can be avoided in most cases by the adoption of a regular plan and method of studying such as the writer is about to describe.

Deducting eight hours, which we will consider the average requirement for sleep, we have sixteen hours to be consumed in the day's requirements, medical and otherwise. Of these sixteen hours, let us allot one hour to toilet purposes—dressing, retiring, and closet; two and a half hours to meals—three quarters of an hour each for breakfast and lunch, and one hour for dinner (including the post-prandial cigar or cigarette); an hour and a half to exercise; one hour to unavoidable waste; this leaves ten hours for study. Thus:

Sleep		8 hours;
Meals	Breakfast. ¾ Lunch.... ¾ Dinner... 1	2½ "
Exercise		1½ hour;
Toilet purposes		1 "
Unavoidable waste		1 "
Study		10 hours.
		24 "

The time allotted to study embraces the hours spent in attending lectures, clinics, recitations or quizzes, and in reading. It will be noticed that no allowance has been made for time consumed in going to and from college; this should be considered as exercise, and the student does well who selects a boarding-house distant about fifteen minutes from college, and forms the habit of walking briskly in coming and going; to a hard student, such exercise is the most beneficial, since it is severe enough without being fatiguing. But the medical student must have recreation just as more fortunate beings; he should devote one entire day each week to recreation or rest without any medical thoughts, and also one evening during the week—preferably about the middle; but this evening can not be fixed upon any particular day, and had better be taken when the student feels the need of it. There always occur to every one periods when the mind refuses to act sufficiently for careful reading; when such a time appears, let the student give up the attempt, and spend the evening at the theatre or in the company of friends at some other sort of amusement.

Doubtless many who have been in the habit of studying by fits and starts—of working one week until two or three in the morning, and the next week, as a consequence of overfatigue, have been unable to do any work at all—will think such a plan too strict and involving too much sacrifice of enjoyment; but, wishing to know even a moderate amount of medicine, he must expect to make a sacrifice if he desires to graduate with credit at the end of three years' work. Such a subdivision of the day is not recommended from theory; such very gratifying results have been observed from its adoption by many students that the writer feels confident that all who substitute it for the fitful all-night work in spells will have every reason to be satisfied after a fair trial. It is the man who works methodically and regularly, who observes the rules of health which such a plan allows, retires at eleven and allots proper time to meals and exercise, that comes out ahead, rather than the overworked student, who, with too little sleep, insufficient or no exercise, hasty meals, and an endeavor to force an abnormal amount of brain-work, breaks down when the session is but half over and is compelled to do a mediocre amount of work during the rest of the term; while the man to whom such a plan is too laborious, involves too much outlay of mental energy, and is undesirable because perhaps it cuts off too many enjoyments in the way of society gatherings, etc., may manage to secure his diploma, but will certainly know but a small percentage of what three years' study should represent.

Besides adopting some such *plan* of work, *method* should be inculcated in the student's labors. It is almost needless to state that committing to memory, word for word, is rarely necessary in medical study; careful and repeated reading, giving one's full attention to the subject in hand, is the proper method of retaining knowledge. In anatomy, for instance, in studying osteology, the bones or skeleton should be next to the student. When a case presents itself in a clinic, he should read up all about the disease illustrated at his earliest opportunity. Again, knowing what the lecturer is going to treat of, he should have read over carefully the expected topic the evening before; he will then derive many times more benefit from the delivery than if the topic is new to him; if he has done this, he will also be in a good position to take serviceable notes of the lecture—not an attempt to report it in entirety, but simply headings, together with opinions of the lecturer differing from those expressed in text-books or not to be found there.

Finally, about quiz-classes. Are they a necessary adjunct to the medical student's curriculum? If he has sufficient determination to carry out the advice given above, he needs no quiz-class; many, however, lack in will-power and do not adhere to a regular plan of work unless pushed by the knowledge of having to answer in class—this acts as an incitant to study; to others these classes are a sort of relief from study, a grateful competition through which they can compare their progress with that of others, and very often an aid. Hence it is that so many and probably the great majority of students avail themselves of the many quiz-classes existing in all cities possessing medical colleges. No need for such extra instruction would exist were the practice of holding recitations—attendance at which is compulsory and answers rated—which exists in literary colleges, prevalent in those of medicine.

Much of the above information may seem unnecessary; but the writer's experience with a large number of students from a college rated among the best, as well as with graduates from colleges all over the country, in the capacity of preceptor, makes him feel confident that it will prove welcome to many who have not had any but their own guidance in the methods and plan of medical study.

Foreign medical journals are in the habit of speaking disparagingly of the requirements for the degree of "Doctor in Medicine" in this country, while overlooking their own defects in this line; it must be admitted that, in some parts of the United States, there is some foundation for such remarks; but it is daily becoming less. Every opportunity for the most thorough acquisition of every branch of medicine exists in our country; this is shown by the fact that our best men are equal to those of other countries; they hold their own at international congresses, while sometimes an American even captures a prize in competition in foreign lands (as at Brussels recently). It rests, therefore, chiefly with the student to what extent he will avail himself of undisputed opportunities; it depends in great measure upon his interest, perseverance, and work, whether he will occupy "the upper stories" or mingle with the crowd; and, in the hope that to him they will prove serviceable, the foregoing lines have been written.

202 East Fifty-eighth Street, New York, *August 4, 1886.*

Correspondence.

LETTER FROM PARIS.

The Retiring Professors.—New Medical Buildings.—A Clinical Lecture by Professor Hardy.—Medical and Surgical Congresses.

Paris, *September 4, 1886.*

Medical news is never scarce here, and, although this is the season when the School of Medicine is closed and the professors and the hospital doctors are taking their holidays, that very circumstance brings out the abilities of the younger men of the profession who replace them during the vacation, and gives them a chance to deliver clinical lectures which more than equal the masters' in "go" and eloquence, if they have not the same depth in science. By the way, the Paris Faculty will be somewhat changed in composition when it next meets. As in most bodies of the kind, none of its members ever resign and but few die; but, according to a new law, all professors are to be retired on reaching the age of seventy. An exception is made in favor of those who are also members of the Academy of Medicine; they are permitted to remain up to the age of seventy-five. Three of the Paris professors have attained the limit, and they are now put on the retired list. They are Professor Sappey, Professor Hardy, and Professor Gavarret. Professor Sappey, the well-known anatomist, gave his usual course of lectures last winter with all his accustomed grace of diction. He is a remarkable man in many ways. First, as to his appearance, he is a type of the old-style fine gentleman—tall (full six feet in height) and stout in proportion, with smoothly shaven face and long white hair. He is never seen without a dress coat, and it is closely buttoned up to his neck, which bears the old-fashioned stock and collar. Always in a full black suit and with a high hat, his erect figure can be seen crossing the Luxembourg gardens daily as he is on his way to the School of Medicine or the Academy of Medicine. Of late years his lectures have not been much attended; partly because he took up but a very small portion of his subject yearly, which he elaborated in his usual style, with great attention to detail. We all know his fancy for counting and numbering everything. It was he who first counted the pores of the skin and measured its square surface (15,000 square centimetres). He once said in a lecture that the ovaries of one woman contained ova enough, if they were all fertilized, to populate a city as large as Paris. Another reason for the small attendance at his faculty lectures is the fact that anatomy is now taught practically in Paris, which at present possesses the most extensive and best-arranged anatomical school in the world. It is not generally known, perhaps, that the French Government is now engaged in erecting at Paris, Bordeaux, Nancy, Montpellier, and other cities where there are faculties of medicine, a series of fine new buildings for medical purposes. Those in process of construction and partly finished in Paris cover an immense space of ground adjoining the old buildings and fronting on the Boulevard St.-Germain in the Latin Quarter. When they are all completed they will surpass any other buildings for the purpose. The anatomy pavilions, for instance, consist of eight large separate one-story buildings of marble for this special use. They are very lofty and airy, with an arching glass roof, much like a series of artists' studios. In the cellar are the pickle vaults. Each pavilion contains twenty tables, made with black slate tops and iron legs. There is a total of one hundred and sixty tables; but during the winter additional ones are used, so that often there are two hundred subjects being dissected. Material is plentiful, coming from the twenty-five hospitals, and the French people are not at all scrupulous about having their poor relations who die in these institutions buried. Every one of these eight pavilions is presided over by a prosector of anatomyand six *aides d'anatomie*, who each in turn give daily practical lessons on the subject. The students are compelled to attend from noon to 4 P. M. daily, from November to March, inclusive, for two years. The director of this series of anatomical schools is Professor (*agrégé*) Farabeuf, and it is he who will now probably become a full professor in Dr. Sappey's place at the Faculty. Professor Gavarret, the second of the retiring professors, was the professor of physics, but for several years past he has given no lectures, being replaced by Dr. C. M. Gariel, author of many works on physics and electricity, who no doubt will succeed Dr. Gavarret as professor of physics.

Professor Hardy, the third one, was professor of clinical medicine and in charge of several wards at the *Hôpital de la Charité.* While this eminent practitioner presents every sign of his advanced age, he also is extremely active, and his voice remains loud and clear. There is hardly a French medical journal that does not contain reports of his remarkable clinical lectures, which are models of clearness and cleverness in diagnosis. No one is as yet designated for his place, and it will not be known before the autumn meeting of the faculty who will have the extremely difficult task of following the great master in medicine. A recent interesting case at *La Charité* will serve to show his powers of diagnosis. The patient was a young woman who presented nothing out of the way in her antecedents, beyond some slight eruption of a strumous nature that she spoke of and a cold abscess, which she had had on her left arm, that still bore the cicatrix. For a long time before, she had been in good health, when, last January, she felt a pain from time to time in the middle of her chest, which, she thought, came from a cold. After a few days she had a dry, hacking cough, which gave her great pain, and, on going to a doctor, she was submitted to an active medication, with the application of actual cautery points to the part. Notwithstanding all this, she got no better; on the contrary, every muscular effort brought on oppression, so, on entering the hospital, she had four well-marked signs: 1. Pain in the right side of the chest. 2. Cough at intervals. 3. Oppression, also at intervals. 4. Difficulty in swallowing. Added to this, the face and part of the body were in a state of cyanosis, and there was slight swelling of the neck, but no œdema of the arms. On auscultation, there was a pronounced laryngo-tracheal whistling sound heard, with a strident bruit, all over the chest. On percussion, the right side of the chest gave a dead sound under the clavicle. Dr. Hardy's diagnosis was compression of the trachea and bronchial tubes by a tumor. There was no pulsation, and, the woman being young, aneurysm was not thought of. The treatment was with iodide of potassium, in case it might be an adenoma, and morphine alternated with chloral to calm the pain. The prognosis was serious, and after a few days the patient died. Dr. Gaucher made the autopsy, which confirmed Professor Hardy's diagnosis. The tumor was an intra-thoracic sarcoma of a malignant character.

Medical and surgical congresses are all the rage this summer. The *Association française pour l'avancement des sciences* held its meetings at Nancy this year, and a number of papers were presented that are worthy of mention, but I fear that the space you can allow will not admit of it. Its next meeting will be at Toulouse. The *Congrès international de climatologie et d'hydrologie* will open its meetings at Biarritz on the 1st of October. Excursions will be given to all the watering places and health resorts by the railways at fifty per cent. discount from regular prices to members, and many interesting papers will be read. Finally, the *Congrès français de chirurgie* will hold its second annual session in Paris from the 18th to the 24th of October, in the large amphitheatre at the school of medicine. A great many surgical questions will be discussed by the most prominent surgeons of France. Your correspondent will be present, and will send accounts of the proceedings.

LETTER FROM WASHINGTON.

Prominent Medical Men's Summer Vacations.—The Medical Corps of the Army and Navy.—The Library of the Surgeon-General's Office.—The Georgetown Medical College.—The National Board of Health.—Preparations for the International Medical Congress.—"Love and Medicine."

Washington, *September 12, 1886.*

Although the September sun is still scorching in the daytime, the city, which has been deserted during August, has begun to fill up again. The wandering doctors are daily returning to their patients and their drugs. Dr. Taber Johnson, and Dr. Billings, of the army, visited Europe, and nearly all of the remaining members of the society have sojourned for a longer or shorter period at some of the American watering places. Dr. Garnett visited Saratoga and Lake George; Dr. Sowers and Dr. Bulkley, Bar Harbor; Dr. Stanton, Deer Park; Dr. Bayne, Cape May; and it is to be presumed that all of these gentlemen carried with them the *savoir faire* which distinguishes them at home.

Medical Director A. L. Gihon, the accomplished president of the Section in Medical Climatology and Demography of the International Medical Congress, has been ordered to Mare Island, California. Medical Director Hord has been ordered to Philadelphia. Dr. Hord had been placed on the Committee of Arrangements.

The question of the succession to Surgeon-General Murray is not yet settled, but it is believed that the present Acting Surgeon-General, Dr. J. H. Baxter, will receive the appointment. Among other candidates, Dr. Joseph K. Smith holds a prominent place, as also does Dr. Southerland. The seventh volume of the "Index Catalogue of the Library of the Surgeon-General's Office" has just been issued. It brings the index down to "Leghorn." The gentlemen connected with this work in the commencement are still in charge of it—namely, Dr. Billings, Dr. Robert Fletcher, and Dr. Wise. The new building for the library is progressing slowly but surely, and is now tall enough to show its handsome design.

The Georgetown Medical Faculty have their new college building in Washington nearly completed, and expect to have it ready for lectures October 1st. The introductory lecture this year will be delivered by Dr. John B. Hamilton, the professor of surgery.

The National Board of Health, having failed to receive any appropriation from Congress, have given up their quarters on G Street, and taken down their sign. Except the secretary, Mr. Dunwoody, none of the members of the board have been on duty for many months, as no meeting has taken place. There has, however, been little necessity for a meeting, as the powers of the board over quarantine matters long since expired by statutory limitation.

Dr. Garnett, the chairman of the local Committee of Arrangements of the International Medical Congress, will call a meeting of his committee early in October. He hopes soon to announce the perfection of rates of railroad and steamship fares to and from the Congress. The subcommittee in charge of that portion of the work, Dr. Lovejoy, chairman, have been actively engaged in correspondence.

The Secretary-General has opened a register of foreign members in which are inscribed the names of medical gentlemen abroad who notify him of their intention to be present. The list is already quite large and will soon be furnished you.

That *our* doctors occasionally dip into romance, as well as those of New York, is made known by a rather interesting novel, entitled "Love and Medicine," by Dr. Charles F. Gilliam, of the Bureau of Labor Statistics. The hero of the story is, of course, a doctor of remarkable acumen, the romance of whose early life makes up the book. Some of the scenes are realistic and interesting. We recall particularly that recording the coroner's inquest over the "subject" which "Jim" had been dissecting, the description of the medical lecture, and Doctor Jim's final tussle with yellow Jack.

The Health of Chicago.—According to the "Condensed Statement of Mortality," for August, the whole number of deaths during the month was 1,352, including 1 from carbuncle, 201 from cholera infantum, 6 from cholera morbus, 18 from croup, 27 from diarrhœa, 11 from dysentery, 74 from diphtheria, 38 from entero-colitis, 5 from erysipelas, 8 from cerebro-spinal fever, 1 from intermittent fever, 2 from remittent fever, 21 from scarlet fever, 57 from typhoid fever, 13 from typho-malarial fever, 16 from measles, 2 from pyæmia, 5 from septicæmia, and 15 from whooping-cough.

THE
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SOCIETY WORK IN NEW YORK.

We have before now alluded to the fact that some of the private medical societies of New York had not of late displayed much intellectual activity, and as a new season is now opening we are tempted to inquire whether any improvement may be expected. The only indication to the general profession of the condition of a private society is afforded by its printed proceedings. Judging by much of what has been published during the past year, the character of the scientific work done by some of the special medical societies of New York has not been up to the pitch that the profession has a right to look for. Running through the proceedings there are marks here and there of a struggle on the part of the secretaries to make the most of exceedingly scanty material. Moreover, it is apparent in too many instances that the bulk of the talking is done by a few men, who seem to feel called upon to reiterate their ideas until one would suspect that they must themselves be weary of talking. With no thought of irreverence, many a session of a New York medical society might be compared to a dull prayer-meeting; what is said is so manifestly perfunctory. The terse admonition, "Have something to say, say it, and then stop," should be oftener borne in mind.

On comparing our society proceedings with those of similar bodies in other cities, either in this country or abroad, the contrast is sometimes striking. What is the cause of this difference? We are not ready to admit that there is less capability or less enthusiasm here than elsewhere, and we are perfectly sure that our poor showing is not the result of our proceedings being reported with less care and attention to detail. Indeed, irrelevant details are apt to be given too faithfully; they obscure the points really brought out, and often so disgust the reader that he skips the report. It is largely on this account that for several months past we have been cutting down the proportion of space which in this journal was formerly devoted to reports of society meetings. It is not the reporters who are to blame for the prolixity and inanity that pervade the proceedings. Most of them are capable of giving condensed and readable reports, and are quite willing to do so, but they have continually before them the prospect of incurring the dislike of some voluble speaker who imagines that his importance can be enhanced in the eyes of his fellow-men by the space his remarks are allowed to occupy in the printed report. The fault lies rather in the careless and slovenly way in which many men put their ideas into words, in their failure to prepare for the discussions, and in the fact that few societies are free from the blighting presence of the member who talks "against time." We all know him, and we have all seen gloom and depression settle over a meeting when he begins, with true Ollendorffian inconsequence: "I have never met with a case of extra-uterine pregnancy similar to the one described by the reader of the paper, but I should like to recall briefly a case of croup which occurred in my own practice." Then there is the man with the pailful of specimens, who has no compunction whatever about spinning out to the utmost whatever occurs to his mind from their contemplation, and whose only source of regret seems to be that he was not allowed to bring the rest of the remains with him. Next, there is the loquacious presiding officer, who, in his laudable determination that the proceedings shall not flag, unconsciously takes up the greater part of the time with his own tongue. Finally, there is the most odious bore of all—he who revamps what he has said before one society for the delectation of a second and a third, and does his best to vitiate the value of the future statistician's work by putting him in danger of being led into the error of counting one case as two or three.

PROFESSIONAL SECRECY AND LIFE INSURANCE.

We learn from the "Union médicale" that a case was lately tried before a French court in which the secrecy imposed upon medical men by the law was pleaded by a physician as his justification for refusing to certify as to the nature and duration of the last illness of a man who had insured his life in the sum of ten thousand francs. The life insurance company demanded the certificate as one of the conditions on which it would pay over the amount to the estate, and it appears that the heirs, for their part, united in absolving the physician from the obligation of secrecy. But the doctor held that it was not within the legal power of any representative or heir of the deceased to dissolve the obligation—that, he contended, was a function vested only in the sick person up to the time of death, and one that could not pass into other hands after the death. He held also that he was not at liberty to use his own discretion in the matter, but was absolutely bound to secrecy.

He laid the question before his professional brethren of Havre, the town in which the case was tried, and they sustained him. Furthermore, the court affirmed the validity of the position taken. It was laid down that, admitting that a patient might in certain cases relieve his medical adviser of the obligation of secrecy, that power was absolutely personal and could not be transmitted to the heirs; also that the physician must be the sole judge as to whether or not, in any given case, he had been consulted under the seal of secrecy.

The writer in the French journal expresses the hope that these points may be sustained on appeal, and thus the rule of procedure be definitely settled. It might work hardship in exceptional instances, unless the insurance companies were compelled to pay regardless of the cause of death, but it certainly seems as if in the generality of cases nothing but the public good would be promoted by enforcing the points put forward in this case.

MINOR PARAGRAPHS.

THE PHYSICIANS OF CHARLESTON.

It is hardly necessary to call our readers' particular attention to Dr. Sayre's timely letter, or to the inclosed communication from Dr. Porcher. That the Medical College of the State of South Carolina finds itself crippled by the injury to its building which the earthquake gave rise to just at the time when its annual session is about to open must commend the institution to the profession throughout the country as specially deserving of prompt and unstinted aid. We would not in any way restrict the part which American physicians will undoubtedly take in contributing to the various general funds for the relief of the people of Charleston as a whole, but we think it would be well —and we owe the suggestion to a verbal hint dropped by Dr. Sayre—if to a great extent the contributions made by medical men were set apart for the aid of their professional brethren in Charleston. In pursuance of that idea, some of the gifts that in the natural order of things would go through official or commercial channels might be sent to Dr. Porcher, with an intimation of the donors' preferences as to whether they should be applied to the needs of the medical college, or to those of individual sufferers among the medical men of Charleston, or as Dr. Porcher and his associates may think best. We would also call attention to Dr. Thomas's appeal in behalf of the college, which will be found in this issue.

ITEMS, ETC.

Infectious Diseases in New York.—We are indebted to the Sanitary Bureau of the Fourth Division of the Health Department for the following statement of cases and deaths reported during the two weeks ending September 14, 1886:

DISEASES.	Week ending Sept. 7.		Week ending Sept. 14.	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever............	22	8	28	13
Scarlet fever.	6	3	15	1
Cerebro-spinal meningitis....	2	2	2	1
Measles.....................	20	2	20	5
Diphtheria..................	35	13	27	17
Yellow fever................	1	1	0	0

The Medical College of the State of South Carolina.—Dr. T. Gaillard Thomas, No. 600 Madison Avenue, New York, has sent the following communication to the newspapers:

Through a letter just received from Professor J. Ford Prioleau, Dean of the Faculty of the Medical College of the State of South Carolina, located in Charleston, I have, as an alumnus of that institution and a native of Charleston, been warmly appealed to in its behalf, and requested to solicit aid from the medical men of our country for the restoration of its shattered buildings and ruined appliances for instruction.

"I have been requested by the faculty of this college," says Dr. Prioleau, "to write to you of the desperate condition of its buildings, and to ask you to endeavor to obtain for us some means of replacing the institution. Unfortunately the property will not bear any security, and the friends who so willingly would help us are as much wrecked as ourselves. . . . It is with regret that we are forced to make this appeal."

The winter session of this venerable and eminent institution, which numbers among its teachers in the past Samuel Henry Dickson, Louis Agassiz, and Eli Geddings, and among those of the present some of the most worthy men in our profession, should begin in one month. If aid be not rendered it, quickly as well as generously, its doors must be closed for the coming season.

I will gladly receive all contributions for this purpose, an immediately forward them to the Dean of the faculty.

The American Gynæcological Society will hold its eleventh annual meeting in Baltimore, in the hall of the Johns Hopkin University, on Tuesday, Wednesday, and Thursday of nex week. The programme includes the following titles of papers "Notes on the Treatment of Recent Lacerations of the Cervi Uteri," by Dr. Ellwood Wilson, of Philadelphia; "The Divisio of the Cervix Backward in some forms of Anteflexion of th Uterus with Dysmenorrhœa and Sterility," by Dr. H. P. C. Wilson, of Baltimore; "Another Modification of Emmet's Cervi Operation, with a case in point," by Dr. R. Stansbury Sutton of Pittsburgh; "Pelvic Inflammations—Cellulitis *versus* Peritonitis," by Dr. Thomas Addis Emmet, of New York; "A Plea for Intra-uterine Medication," by Dr. Paul F. Mundé, o New York; "A Case of Abdominal Section for Chronic Suppurative Peritonitis," by Dr. John C. Reeve, of Dayton; Th President's Address, by Dr. Thaddeus A. Reamy, of Cincinnati "Maternal Impressions on the Fœtus in Utero," by Dr. Fordyc Barker, of New York; "The Treatment of Procidentia Uter with the Galvanic Cautery," by Dr. John Byrne, of Brooklyn "Electricity in Gynæcological Practice," by Dr. George J. Engelmann, of St. Louis; "Electrolysis in Gynæcological Surgery," b Dr. W. H. Baker, of Boston; "Persistent Pain after Abdomina Section," by Dr. James B. Hunter, of New York; "The Blu Discoloration of the Vaginal Entrance as a Diagnostic Sign o Pregnancy," by Dr. James R. Chadwick, of Boston; "Th Value of Antipyrine in Puerperal Fever," by Dr. Paul F Mundé, of New York; "Presentation of Specimens of Disease Ovaries, also Specimens from three cases of Supravaginal Hysterectomy," by Dr. R. Stansbury Sutton, of Pittsburgh; "Ergo after Labor," by Dr. John Goodman, of Louisville; "In Memoriam—Albert H. Smith, M. D.," by Dr. T. Parvin, of Philadelphia; and "The High Mortality of the Recent Cæsarea Operations in the United States, with a Report of a Case," by Dr. W. H. Parrish, of Philadelphia.

Dr. G. J. Holmes, New Britain, Conn.—We will bear you question in mind and answer it as soon as we ascertain th facts.

Naval Intelligence.—*Official List of Changes in the Medical Corps of the United States Navy for the week ending September 11, 1886.*

Woodruff, C. E., Assistant Surgeon. Ordered to receiving ship Vermont. October 4, 1886.

Atlee, L. W., Assistant Surgeon. Detached from the Vermont and ordered to the Quinnebaug, per steamer of 25th inst.

Bogert, E. S., Medical Inspector. Detached from the Trenton and placed on waiting orders.

Ferebee, N. McP., Surgeon. Detached from the Trenton, and placed on waiting orders.

Biddle, C., Passed Assistant Surgeon. Detached from the Trenton, and placed on waiting orders.

Scott, H. B., Assistant Surgeon. Detached from the Trenton and placed on waiting orders.

Marine-Hospital Service.—*Official List of Changes o Stations and Duties of Medical Officers of the United State Marine-Hospital Service, for the three weeks ended September 4 1886:*

Bailhache, P. H., Surgeon. To proceed to Cape Charles Quarantine as Inspector. August 27, 1886.

Fessenden, C. S. D., Surgeon. Granted leave of absence for thirty days. August 30, 1886.

Godfrey, John, Surgeon. To proceed to Biloxi, Miss., and investigate alleged yellow-fever cases. September 1, 1886.

Irwin, Fairfax, Passed Assistant Surgeon. Granted leave of absence for thirty days. September 2, 1886.

Society Meetings for the Coming Week:

Monday, *September 20th:* New York Academy of Medicine (Section in Ophthalmology and Otology); Hartford, Conn., City Medical Association; Chicago Medical Society.

Tuesday, *September 21st:* American Gynæcological Society (first day—Baltimore); New York Academy of Medicine (Section in Theory and Practice of Medicine); Medical Society of the County of Kings, N. Y.; Ogdensburg, N. Y., Medical Association; Connecticut River Valley Medical Association (Bellows Falls, Vt.).

Wednesday, *September 22d:* American Gynæcological Society (second day); New York Pathological Society; American Microscopical Society of the City of New York; Medical Society of the County of Albany; Philadelphia County Medical Society (conversational).

Thursday, *September 23d:* American Gynæcological Society (third day); New York Academy of Medicine (Section in Obstetrics and Diseases of Women and Children); New York Orthopædic Society; Brooklyn Pathological Society; Roxbury, Mass., Society for Medical Improvement (private); Pathological Society of Philadelphia (conversational).

Friday, *September 24th:* Yorkville Medical Association (private); New York Society of German Physicians; New York Clinical Society (private); Philadelphia Clinical Society; Philadelphia Laryngological Society.

OBITUARY NOTES.

James Goodchild Wakley, M. D., M. R. C. S.—Two weeks ago we acquainted our readers with the report of the death of the editor of the "Lancet." We then expressed our hope that the statement would prove to be unfounded—a hope that has since been strengthened by the fact that thus far none of our medical contemporaries in this country, so far as we have observed, have alluded to the matter. We regret, however, that we are now obliged to admit that the announcement of Dr. Wakley's death was true.

The deceased was the youngest son of the founder of the "Lancet," and for twenty-five years he had been its editor, continuing in the active performance of his onerous duties up to within a few months of his death. Indeed, he had submitted to him the proofs of some articles that were published in the last number of the "Lancet" issued before his death. Dr. Wakley had never been a practitioner of medicine, but a more honorable or a more useful career than his has seldom been followed by a member of our profession. It is unnecessary to refer, even briefly, to his achievements; they are known to the medical world. It appears that he was an amiable and benevolent gentleman, and that he looked forward to his death courageously, relying on the religious convictions that he held to. He died of epithelioma of the tongue and pharynx, which appeared three years ago in the form of a simple ulcer of the tongue, apparently due to irritation by a rough tooth. At the time of his decease he was in his sixty-first year.

John Burke, M. D., died on Wednesday of last week, at the age of fifty-nine years. The deceased was a native of New Brunswick, but came to New York in his youth. He was graduated from the Medical Department of the University of the City of New York in 1849, and had since been a busy and successful practitioner. He was a member of the Academy of Medicine, of the Physicians' Mutual Aid Association, of the Society for the Relief of the Widows and Orphans of Medical Men, and of the New York Medical Union.

Letters to the Editor.

OUR BRETHREN IN CHARLESTON.

285 Fifth Avenue, New York, *September 13, 1886.*

To the Editor of the New York Medical Journal:

Sir: The inclosed letter from Professor Peyre Porcher explains itself, and I know of no better way to accomplish the object he desires than to publish the same in your widely circulated Journal, and appeal to our professional brethren throughout the whole country to come at once to the assistance of our suffering friends in the terror-stricken city of the South. If each physician will only send the receipts of one day's practice, or, if unable to spare so much, send the *first* consultation fee received after reading this letter, the aggregate amount will make a handsome sum, and accomplish the object desired. The smallest sum forwarded to Dr. Porcher will be gratefully acknowledged by the physicians of Charleston. Feeling perfectly confident that this appeal will not be made in vain,

I remain yours respectfully,

Lewis A. Sayre.

[Dr. Porcher's Letter.]

Medical College of the State of South Carolina,
4 George Street, Charleston, S. C., *September 11, 1886.*

Professor L. A. Sayre, M. D.

Dear Doctor: In the great calamity which has befallen the people of this city the Medical College of the State of South Carolina has been seriously injured—to such an extent that the faculty have felt constrained to appeal to members of the profession to aid them in repairing the damages. I have been requested by the faculty to write to you, asking that you will use your influence among friends to obtain any assistance in their power. We hope to begin lectures on October 15th, perhaps in a temporary building. The entire roof of the college will have to be reconstructed; the walls also parted. The contributions to the people have been very generous; but medical institutions and physicians derive no benefit from such. You know what a peculiar position we occupy—every service expected of us, and the most unselfish devotion to relieving others, while we are supposed to be endowed with the faculty of living on air. I need not give you any description of the scenes through which we have passed, the character of which has not been exaggerated in the papers, as these last have furnished the entire country with full particulars. We are still sleeping in a tent in a garden, as women and children complicate the difficulty and are not readily moved out of the house in case of a shock. These have greatly subsided in force and frequency, and confidence is being fast restored. My house is seriously injured, but habitable.

I remain, dear doctor, with best wishes for your health,

Sincerely yours,

F. Peyre Porcher, M. D.

Book Notices.

The Care of Infants: a Manual for Mothers and Nurses. By Sophia Jex-Blake, M. D., etc. London: Macmillan and Co., 1884. Pp. xiii–109.

Of making many manuals, in these latter days, there is no end. In the present instance the author has been modest and considerate and has made a very small one. While many of its maxims and assertions are trite and homely, they are as important as ever. American midwives and nurses may not agree with the author as to some details of infant management, but in all essentials the little work is sound, and we wish its information may be widely disseminated.

The Blot upon the Brain: Studies in History and Psychology. By William W. Ireland, M. D., Edin., formerly of H. M. Indian Army, etc. New York: G. P. Putnam's Sons, 1886. Pp. viii–374. [Price, $3.]

The title of this book is taken from a couple of lines by Tennyson, and is truly a poetic one, affording as it does free scope for the imagination to conjecture the nature of the contents of the volume. The first paper treats of hallucinations; the five following are of historical interest. Paper II is entitled "The Hallucinations of Mahomed, Luther, and Swedenborg." Mahomed was the subject of epilepsy, and the author maintains that he suffered also from hallucinations of sight and hearing, which formed some of the phenomena of the irritable state of the nervous system that gave rise to the epilepsy. Luther's delusions about the devil are explained as in great part being due to the prevailing superstitions and to an exhausted and irritable condition of his brain. The article on the character and hallucinations of Joan of Arc is exceedingly interesting. It would seem that she suffered from hallucinations of several of the senses—of sight, hearing, touch, and smell. In Paper V the history of "the hereditary neurosis of the royal family of Spain" is delineated. Paper VI treats of St. Francis Xavier, "the Apostle of the Indies." The preservation of his body for so long a period as fifteen months, the author thinks, can be explained by assuming that the sailors, from mercenary motives, embalmed it with spices. The following six papers are devoted to psychological subjects. The crusades are looked upon as evidence of wide-spread epidemics of insanity, similar to the dancing mania of the thirteenth and fourteenth centuries in the greater part of Germany and France. In Paper IX Mr. Ireland forcibly controverts Dr. Carpenter's theory of unconscious cerebration, and he would interpret the phenomena which that theory explains by assuming that we can be conscious of more than one thing at a time. Paper X is on "Wordless Thought." The author does not think that speech is absolutely necessary to the exercise of thought. "There are some actions as well as perceptions too fine to be expressed in words."

Perhaps the most interesting paper of the series is the last, on the "Dual Functions of the Double Brain." The old idea that man is possessed of two spirits—an evil and a good one—which are constantly struggling against one another, finds its counterpart in the modern theory that the two hemispheres of the brain may act independently of each other. The author holds that this really occurs in disease of one of the hemispheres —"the healthy hemisphere subdues the irascibility of the other, corrects its strange fancies, and bridles its wild impulses. By degrees resistance is increased, the stronger feeling predominates, and the mind is whirled into insanity or the reason slowly sapped, as Pauline was led away by the delusions of her sister Leontine." The book is intended for the intellectual of all classes, and affords much food for reflection for all thinking minds. The author is well known for his scholarly attainments and for his depth of observation. Any opinions emanating from him are worthy of profound study. The publishers are to be complimented upon the fine form in which they have presented the work to the public.

Transactions of the American Surgical Association. Volume the Third. Edited by J. Ewing Mears, M. D., recorder of the association. Philadelphia: Printed for the Association, and for sale by P. Blakiston, Son, & Co. 1885.

The contents of the third volume of the "Transactions of the American Surgical Association" show no diminution in the value of the papers read nor in the discussion following their presentation. The association is evidently a working one, and is doing much to bring the experience of American surgeons before the profession.

The following are the titles of the papers read: "The Field and Limitation of the Operative Surgery of the Human Brain,' by John B. Roberts, M. D.; "Nephrectomy: its Indications and Contra-indications," by Samuel W. Gross, A. M., M. D.; "Nephrolithotomy," by L. McLane Tiffany, M. D.; "The Healing of Arteries after Ligation," by J. Collins Warren, M. D.; "Some Points in the Surgery of the Hypertrophied Prostate," by John W. S. Gouley, M. D.; "The Culture of Surgical Bacteria," by H. C. Ernst, M. D.; "An Experimental and Clinical Study of Air-Embolism," by N. Senn, M. D.; "The Ætiology of Traumatic Tetanus," by P. S. Conner, M. D.; "Report of a Case of Cholecystotomy," by C. T. Parkes, M. D.; and "Phosphorus-Necrosis of the Jaws," by J. Ewing Mears, M. D.

The paper by Dr. Roberts on the surgery of the brain is one of the longest in the series, and will naturally attract much attention. The writer has evidently expended much time and thought upon it, and he has produced a paper of great value It was ably criticised in the discussion which followed its reading, and many exceptions were taken to some of the statements of the writer, so that, taking the paper and the discussion together, the reader gets a very clear idea of the scope of the surgery of the brain. The papers by Dr. Gross and Dr. Tiffany on the surgery of the kidney, are well worth reading.

The paper by Dr. Senn, on air-embolism, is a long and able one. It is rather of a physiological than a surgical nature.

Taking the papers as a whole, we think the members of the association have every reason to be satisfied with their work and we trust that we shall have the pleasure of welcoming many future volumes of the Transactions.

A Course of Instruction in Zootomy. (Vertebrata.) By T Jeffery Parker, B. Sc. Lond., Professor of Biology in the University of Otago, New Zealand. With Seventy-four Illustrations. London: Macmillan & Co., 1884. Pp. xxiii–397. [Price, $2.25.]

Parker's "Zootomy" may well be compared with Martin and Moale's "Handbook of Vertebrate Dissection," since, like the latter, it is a dissecting manual for the study of comparative anatomy, and necessarily, therefore, is carried out on the same general plan, even agreeing with it in the minutiæ of classification and arrangement. Originality can not be looked for in a book which consists simply of directions for the systematic dissection of some of the more common vertebrate animals, and the entire merit of such a work must lie in its choice of material, in its accuracy of detail, and in the perspicuity of its arrangement. As to the accuracy with which the work has been done in this instance, it bears all the evidences of having been faithfully performed, and in respect to arrangement of materials and compactness it leaves nothing to be desired. The vertebrates chosen for demonstration are the lamprey, the skate the cod, the lizard, the pigeon, and the rabbit. Directions for the dissection of each are given in detail, with descriptions of the parts brought into view, and pictorial illustrations wherever necessary. It is, as will be seen, essentially a book for the working student of comparative anatomy, and it impresses us as being very well adapted to its purpose.

Handbook of Diseases of the Skin. Edited by H. v. Ziemssen M. D., Professor of Clinical Medicine in Munich; editor of von Ziemssen's "Cyclopædia of the Practice of Medicine.' Contributors—H. Auspitz, M. D., Vienna; V. Babes, M. D. Budapest; E. Geber, M. D., Klausenburg; E. Lesser, M. D. Leipsic; P. Michelson, M. D., Königsberg; A. Neisser, M. D., Breslau; E. Schwimmer, M. D., Budapest; P. G

Unna, M. D., Hamburg; E. Veiel, M. D., and T. H. Veiel, M. D., Canstatt; A. Weyl, M. D., Berlin; H. v. Ziemssen, M. D., Munich. Illustrated with eighty wood engravings and color prints. New York: William Wood & Co., 1885. Pp. x–658.

As the publishers have stated in their preface, it is, indeed, an unprecedented thing for a work of this magnitude to be distributed gratuitously among their patrons. It appears as a supplement to von Ziemssen's "Cyclopædia of Medicine." Much, therefore, is to be expected of it as a portion of that magnificent work. Excellent features of the book are the chapters on the anatomy, physiology, nosology, and semeiology of the subject, which precede the series of monographs under which the subject proper is considered. It is interesting to note the numerous quotations from and references to the works of well-known American dermatologists, a courtesy (shall we term it?) which is far from frequent among foreign authors. The treatment of the various subjects is satisfactory, the field embracing not only diseases of the skin proper, but also new growths and conditions which are commonly considered as belonging to the domain of surgical pathology. This comprehensive method seems entirely appropriate, and will doubtless be appreciated by those who are fortunate enough to secure a copy of the book. The names of the translators of most of the sections are withheld, which seems rather like an unfair discrimination.

Medical Diagnosis: a Manual of Clinical Methods. By J. Graham Brown, M. D., F. R. C. P. E., etc. Second Edition. Edinburgh: Bell & Bradfute, 1883. Pp. xvi–370.

The fact that this book has reached a second edition is *prima facie* evidence in its favor. In this country it will naturally be compared with Da Costa's classical treatise on the same subject. While it is not so thorough as the latter, it covers a wider range of subjects. It seems to have been founded somewhat too exclusively on hospital observation, and as a consequence the peculiarities met with in private practice are rather insufficiently taken into account. The author has shown excellent judgment in giving considerable attention to semeiology, a matter which, in many recent treatises on the practice of medicine, has been too much overshadowed by elaborate details pertaining to physical signs. We are surprised to find this statement concerning broncho-vesicular breathing: "In disease this variety of breathing is usually the result of partial blocking up of the bronchi leading to the part of the lung examined, or to the interposition of some badly conducting substance between the lung and the stethoscope, such as pleural effusion, tumor, or even œdema of the chest-wall"—three conditions in which broncho-vesicular breathing is *not* found. It is now generally admitted that it is met with only where there is partial solidification of lung. On the whole, the book is one of considerable value.

A Text-book of Physiology. By M. Foster, M. A., M. D., F. R. S., etc. Third American, from the fourth and revised English Edition. By Edward T. Reichert, M. D., Demonstrator of Experimental Physiology in the University of Pennsylvania. With Two Hundred and Seventy-one Illustrations. Philadelphia: Lea Brothers & Co., 1885. Pp. 911.

The reputation of Dr. Foster's work rests upon such a solid basis that it is unnecessary to do more than refer to its many excellent features. It remains the foremost English text-book upon physiology. The present American edition has received some alterations and additions, and continues to reflect credit upon the editor. All of the readers will not agree with the author that it was advisable to make the type uniform, instead of introducing controverted statements and descriptions of experiments in fine print. Under the new arrangement the book is hardly adapted to any except advanced students. The omission of proper names is also a feature of the present edition, which may not be pleasing to some. The appendix has been somewhat extended, and additional foot-notes have been added.

Epilepsy and other Chronic Convulsive Diseases; their Causes, Symptoms, and Treatment. By W. R. Gowers, M. D., F. R. C. P., Assistant Professor of Clinical Medicine in University College, etc. New York: William Wood & Co., 1885. Pp. xi–255. [Wood's Library of Standard Medical Authors.]

Dr. Gowers's monograph is too well known to require an extended review. Three chapters are devoted to the symptoms alone. The pathology of the disease is thoroughly discussed, each of the different theories being examined in detail. Dr. Gowers leans strongly toward the "discharge" theory. The treatment of epilepsy receives careful attention; the bromides are preferred, since, in the author's opinion, these drugs "increase the stability of the resistance" in the nerve-cells. He believes in giving small doses of potassium bromide and maintaining the treatment for six months or a year after the last fit. When it is discontinued, it should not be done suddenly, but by a gradual reduction of the dose each day. A carefully prepared table of contents and index add greatly to the value of the book. Its general make-up is excellent.

Student's Manual of Diseases of the Nose and Throat: a Digest descriptive of the more commonly seen Diseases of the Upper Air-tract, with the Methods of their Treatment. By J. M. W. Kitchen, M. D., etc. New York: G. P. Putnam's Sons, 1883. Pp. vi–127.

The author says of this little work that it was "written with the primary intention of confirming and condensing his own knowledge of throat diseases." In this we can only hope it has been successful. The practice of writing things down as an aid to memory is an exceedingly good one, and we see no reason why the author should not have derived the usual advantage from it. It is also very well done, but why he should have published it we are unable to discover. Of new matter there is none. Of text-books for students and practitioners there was already a superabundance; most of them much more complete in detail and much more ample in scope. This one is a nicely printed, well-arranged little collection of the most rudimentary knowledge of diseases of the throat and nose.

Epitome of Diseases of the Skin. Being an Abstract of a Course of Lectures delivered in the University of Pennsylvania during the session of 1883 and 1884. By Louis A. Duhring, M. D., Professor of Skin Diseases. Reported by Henry Wile, M. D., Clinical Assistant in the Department of Skin Diseases in the University Hospital. Philadelphia: J. B. Lippincott Co., 1886. Pp. iii–13 to 130, inclusive. [Price, 60 cents.]

Happily the author informs us that the contents of this book are only abstracts from lectures, and as such the book is to be regarded. It will probably be useful to the student of the University of Pennsylvania who has heard Dr. Duhring lecture, and will serve to remind him of the views of his professor of dermatology. It seems a pity that the author should have added this one to the number of "manuals" of skin diseases, of which we have already quite enough, after having published his most admirable "Treatise on Diseases of the Skin," and a superior "Atlas of Skin Diseases."

Reports on the Progress of Medicine.

SURGERY.

The Treatment of Chronic Abscesses by Injections of an Ethereal Solution of Iodoform.—Verchère ("Rev. de chir.," June, 1886) reports twenty-three cases which were treated in this manner, and gives the following directions in regard to the operation: The solutions of iodoform should be of varying strength, one of five per cent. being used for large abscesses, and one of ten per cent. for small ones, while small, superficial abscesses may be filled with a saturated solution. If the skin over the abscess is not affected, the needle of a hypodermic syringe is introduced in an oblique direction, so as to form a valvular fold; the pus is then drawn off and the iodoform solution is injected. If, however, the skin over the abscess is quite thin, the pus is removed with an aspirator, and the opening made by the needle is sealed with collodion, after which a hypodermic-syringe needle is inserted into the abscess cavity, and the injection is made as before. The object of these manœuvres is to prevent the ether from escaping through the puncture, as it at once tends to do on becoming volatilized. As the solution volatilizes, the iodoform is deposited over the entire inner surface of the abscess, and is slowly absorbed—so slowly, in fact, that the danger of poisoning by the drug is said to be very slight. The phenomena observed after an injection are, briefly, as follows: Rapid and sometimes excessive swelling results from the volatilization of the ether, but this soon subsides. If the skin over the abscess is healthy, the abscess cavity will speedily be replaced by indurated tissue, without the occurrence of any external change. If the skin is already inflamed, it will separate in a few days in the form of a yellowish slough, after which healing will occur by granulation, the resulting cicatrix being slight. The advantages alleged for this method of treatment are the perfect safety of the operation, the rapidity of the cure, the fact that the patient is not confined to his bed during the treatment, and the non-recurrence of the abscess.

Epileptoid Convulsions following a Gunshot Injury of the Brain.—Prengrueber ("Bull. de la soc. de chir.," July, 1886; "Lyon méd.," July 11, 1886) reports an interesting case of brain injury, due to a pistol-shot, in which the ball entered the middle part of the temporal fossa. During the first three days after the injury no symptoms were observed except general prostration accompanied by a subnormal temperature. On the fourth day the patient had several epileptoid attacks, whereupon the writer exposed the cerebral wound and removed sever[illegible] splinters which were buried in the brain-substance. An attempt was made to reach the ball with a probe, but it could not be touched. The spasms did not return, and the patient made a perfect recovery.

Arthrotomy.—Jalaguier is the author of a thesis on this subject ("Rev. de chir.," July, 1886), in which he discusses the treatment of four varieties of suppurating arthritis in large joints as follows: 1. In traumatic arthritis it is generally advisable to make two free lateral incisions, to wash out the joint cavity with a solution of chloride of zinc, and to insure perfect drainage. The removal of a portion of the articular end of the bone is indicated only in cases of gunshot or epiphyseal fracture. 2. Arthritis following extra-articular inflammation demands the same operative treatment. 3. A single long incision is best in cases of arthritis of septic origin. 4. In idiopathic arthritis in infants it is better to make two lateral incisions, to drain as before, and then to immobilize the limb. The author adds that the indications for operation in cases of acute serous and sanguineous effusion into the large joints are not clear. Operative interference in cases of simple synovitis is seldom justifiable unless the affection has resisted all palliative treatment as well as aspiration. The operation for the removal of loose cartilages and other foreign bodies is discussed, and the writer concludes that, with proper precautions as regards drainage and fixation, the mortality scarcely amounts to anything.

The Relation between Traumatism and Cardiac Affections.—Nélaton (*Ibid.*) publishes in a Paris thesis the results of observations made in company with M. Franck. He finds that during the early stages (*premières phases*) of cardiac diseases little if any influence is exerted upon the heart by traumatic lesions. In the dynamic stage (*phase dynamiqu* of heart disease, on the contrary, the influence is well marked; it ma be of a nervous character, consequent upon shock, or there may changes in the cardiac rhythm, or even alterations in the myocardiu resulting from hæmorrhage. A simple endocarditis may, as the resu of surgical infection, be transformed into the septic variety. On t other hand, pre-existing cardiac disease may influence traumatism, i creasing the hæmorrhage, on account of modification of the arter tension or changes in the walls of the vessels or in the composition the blood. The relation of cardiac affections to surgical operations not considered. Anæsthesia is dangerous during the dynamic sta and unjustifiable during the advanced stage (*période de cachexie*) heart disease. The condition of the organ itself may constitute a su cient contra-indication to an operation, even if there is no general d turbance. The conscientious surgeon will not perform "a usele operation upon a patient already condemned to death."

A Cure of Cirsoid Aneurysm by Subcutaneous Injections of Alc hol.—Plossing ("Arch. f. klin. Chir.," xxxiii, 1, p. 251) reports t history of a case which was treated at the surgical clinic in Leips The patient, a man twenty-one years old, had a large cirsoid aneurys of the scalp covering the occiput. Two fruitless attempts had pre ously been made to cure it by ligation. When the man was admitt the mass of vessels was as large as a small plate. It was proposed ligate both carotids and then extirpate the tumor, but this appeared be too dangerous. The patient submitted eight times to electro-pu ture without benefit, whereupon it was resolved to trý parenchymato injections of alcohol, with the view of causing contraction of the c cumvascular fibrous tissue and thus compressing the vessels. The i jections were repeated at intervals of two days, first with a thirty-p cent. dilution of alcohol, and afterward with one of seventy-five p cent., one centigramme of the liquid being introduced into the mass several spots. After two weeks the aneurysm was surrounded by dense indurated border; at the expiration of six weeks it was almo entirely transformed into a hard mass in which a slight pulsation cou be felt at two points only. In two months the cure was practica complete. The writer believes that the ease, safety, and painlessne of this method of treatment should commend it to surgeons, especia for varicose aneurysms of considerable extent.

Iodol in Surgery.—Gaetano ("Spallanzani"; "Ctrlbl. f. Chir. 1886, No. 31) has employed this drug instead of iodoform, and wi satisfactory results, no toxic manifestation having been noticed. lupus and in fungous inflammation of the bones and joints he us parenchymatous injections of a solution consisting of one part of iod sixteen of alcohol, and thirty-four of glycerin. The drug may also applied in the form of powder or in that of an ointment. Iodol diffe from iodoform in being odorless and at the same time possessing a m caustic action.

Schmidt ("Berlin. klin. Woch.," 1886, No. 4) reports the resu of experiments with iodol in the Heidelberg surgical clinic. The a vantages noted were the absence of odor, of local irritation, and toxic symptoms, and its undoubted antiseptic power. The action iodol upon wounds seems to depend upon the operation of a small qua tity of iodine and its deposition upon the affected surface.

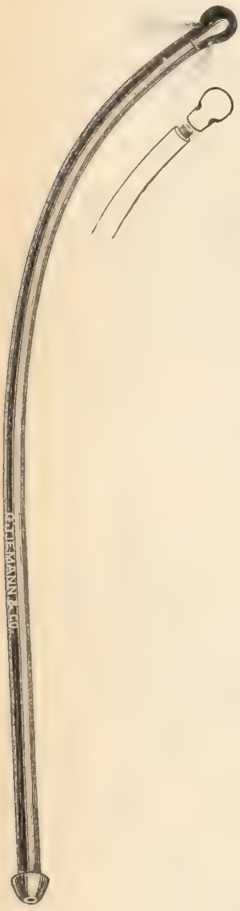
Methods of removing Foreign Bodies from the Bladder.—Ma ("Ctrlbl. f. Chir.," 1886, No. 29), in a paper on this subject read fore the Würzburg Medical Society, states that lithotomy and litho paxy have given the best general results, the mortality in the hands good operators being only five or six per cent. Suprapubic lithoto is not only a difficult operation, but one that has always been follow by a high rate of mortality, even since the introduction of antisepti Lateral and median lithotomy, although not dangerous operations, a not entirely satisfactory, since important organs are liable to be jured.

Sanguineous Cysts of the Neck.—Gluck ("Dtsch. med. Woch 1886, No 5) reports a successful case of extirpation of such a cyst i girl sixteen years of age. It was interesting from the fact that it a peared to be originally a branchial cyst which had communicated wi the internal jugular vein; it was necessary to ligate the vein before t cyst could be removed. Eighteen similar cases have been reported to the present time.

New Inventions, etc.

AN INTRA-UTERINE DOUCHE TUBE.

By H. T. Hanks, M. D.



The instrument which is here pictured was first shown to the members of the New York Obstetrical Society in October, 1884. No full description appeared in the report of the meeting, however, and, as the instrument is proving so useful and the cost so moderate, I feel that the profession deserve a more minute description, including dimensions.

It is designed to take the place of the Chamberlain glass tube. The latter, as we all know, is large, not easily bent, and constantly liable to be broken, when carried in our obstetrical or gynæcological cases.

This hard-rubber tube, which is represented in the cut, is about twelve inches in length, and one fifth to one fourth of an inch in diameter. The distal end is bulb-shaped and removable, about one third to one fourth of an inch in diameter. It should be attached in the usual manner of a screw-cap. The openings in this bulb-shaped end are so arranged, as seen in the cut, that the fluid used is forced backward toward the proximal extremity of the tube, thus avoiding, as much as may be, the danger of forcing fluid into the Fallopian tubes. When the tube is to be cleansed, it is only necessary to remove the bulb-shaped end, and every septic germ can be easily reached and destroyed. The proximal end of the tube is arranged, of course, for attaching the rubber tube of whatever syringe it is desired to use. It can be easily bent to any angle by oiling and heating over an alcohol-lamp or coal fire, or by simply placing the tube in a bowl of hot water for a few moments.

Miscellany.

The Causation of Pneumonia.—In "Science" for August 27th Dr. Henry B. Baker, of Lansing, Mich., says: "In 'Science' for August 13, 1886, p. 133, I notice a paragraph relative to results of observations by Dr. Seibert of seven hundred and sixty-eight cases of pneumonia, wherein it appears that pneumonia prevails to its greatest extent 'whenever there exists a low or falling temperature, with excessive and increasing humidity, and high winds.' This reminds me that readers of 'Science' may be interested to know that facts respecting a very much larger number of cases, and respecting pneumonia in different parts of the United States, in England, and in India—that is to say, in several climates and under different conditions—confirm to some extent the conclusions reached by Dr. Seibert, as mentioned by 'Science.' Such statistics, presented by abstract at the last meeting of the American Climatological Association, demonstrate, I think, that the sickness from pneumonia is absolutely controlled by the temperature of the atmosphere. The higher the temperature, the less the sickness from pneumonia; and the lower the temperature, the more the sickness from pneumonia. This is equivalent to saying that that part of the conclusion of Dr. Seibert which relates to humidity is an error; because the absolute humidity of the atmosphere is, speaking roughly, directly as its temperature, and there is most sickness from pneumonia when, or soon after, the air is driest absolutely; and there is least sickness from pneumonia when, or soon after, the air contains the most vapor of water—that is, when the temperature is highest. The error of many who have written on this subject, and probably the error of Dr. Seibert, consists partly in calling the 'per cent. of saturation of the air' (technically known as 'the relative humidity') the humidity of the atmosphere. But the curve for 'relative humidity' is not, when inverted, the same as the curve for pneumonia, as you may see by comparing such curves, on the diagrams I prepared, based upon over twenty-seven thousand weekly reports of sickness in Michigan, by observers in different parts of the state, and upon over one hundred and twenty thousand observations of the psychrometer during the same time—namely, the seven years, 1878–'84. Relative humidity seems to have an opposite relation in the warm months to what it has in the cold months. The fact, which I think I have completely demonstrated, is that, in any given place wherever studied, pneumonia is quantitatively proportional to the coldness and dryness of the atmosphere; and, as this is true for every month of the year, it follows that, if there is any pneumonia which is infectious, it is absolutely dependent upon those meteorological conditions for its action upon the human organism.

"In the paper to which I have referred I have advanced a theory of the causation of pneumonia consistent with the facts demonstrated; and, briefly outlined, it is as follows: Air expired from the human lungs is nearly saturated with vapor of water at a temperature of about 98° F., and this contains about 18·69 grains of vapor in each cubic foot. The quantity of vapor exhaled is at all times greater than the quantity inhaled; but, when the air is very cold and dry, the quantity exhaled is excessive, as may be seen when we reflect that air at 32° F. can contain in each cubic foot only about two grains of vapor. The fluid which passes out from the blood into the air-cells of the lungs, and which normally keeps them moist, contains some of the salts of the blood; and the chloride of sodium, not being volatile, is mostly left in the air-cells when the vapor passes out with the expired air. When the air inhaled is excessively dry (as it always is when excessively cold), this salt collects in the air-cells of the lungs in considerable proportion. This is proved by my statistics, which show the increase of pneumonia at such times, taken in connection with the fact that chloride of sodium in the lungs is in excess in pneumonia, which was proved in 1851 by Lionel S. Beale, M. D., of London, England. Dr. Beale also verified the observations by Redtenbacher, made in 1850, that during the onward progress of pneumonia the chlorides disappear from the urine, and reappear when convalescence has been established. In the air-cells, the chlorides are irritating when they become concentrated; but the exudation of fibrin, which is the most prominent condition in pneumonia, is probably favored by a fact in osmosis which is not generally well understood—namely, that albumin, which it is usually considered will not pass by osmosis, will pass through an animal membrane to a solution of chloride of sodium. 'Thus the causation of pneumonia by the inhalation of cold dry air seems to be completely worked out. As a cause of deaths, pneumonia is one of the most important diseases. It is hoped that its prevention may now begin.'"

Prostitution.—An open letter to Dr. William M. McLaury, President of the Board of Trustees of the Society of Medical Jurisprudence and State Medicine, etc.:

My Dear Doctor: Please to accept my thanks for the admirably written pamphlet sent me with your compliments some days ago. I read it with profound interest, and, judging by the fairness that characterizes you, I am positive that you will not take umbrage at my differing with you, remembering that the expression of differences without a desire to cavil brings forth light even on a subject so difficult to discuss, yet fraught with such importance to the human family, as that of prostitution.

If the subject could be at all elucidated by a discussion of the catechism with which you preface your interesting paper, I might offer some remarks on each one of your twelve propositions, but will limit myself to decidedly objecting to the definition of lust as "love gone mad." Lust and love, my dear Doctor, can have no connection whatever, and the connection that is the result of love has no connection with the intercourse that gratifies lust. Lust is bestial, material; love is divine, idealistic, as I am sure you know as well as I.

You say: "Broadly defined, the social evil is the expression of love in an unnatural or an unhealthy manner." I do not think that I shall be deemed very obtuse if I fail to see sexual or any other kind of love manifested in the man who hires or the woman who is hired; and the fact that prostitution has existed (yes, "the social evil" *does* sound better, but we are dealing with medical facts) in all times would tend to prove that there is nothing unnatural or unhealthy about the essential part of the subject to which your paper invites discussion.

In the unfortunate confusion which appears in the subsequent sentences, you render a discussion of your proposition impossible, surrounding, as it does, the undeniable truth that "love is higher than written law; law can not control it." Of course it can not; that is an undeniable proposition. But pray, what has love to do with prostitution?

I might thus take each one of your sentences and discuss it, without assuming even a tithe of a magisterial manner toward you—which certainly would be almost impudence on my part, and would not lead to the end to which I propose to call your attention and that of other thinking men who, like you, have the good of humanity at heart. Therefore I will pass over most of your statements and touch only lightly upon those that strike me most forcibly, being as they are so diametrically opposed to the opinions that have resulted from the greater part of my professional life having been cast in the lines of the unfortunates—the sufferers from the consequences of unclean prostitution. I would not lay myself open by this statement to the suspicion that I believe that there is a morally clean prostitution. We all agree that there is not. But physical cleanliness is what I allude to.

And, in discussing your paper at all, I do it prompted by the very unbusiness-like but correct professional desire to reduce the sufferings of those who agree with you when you correctly say (page 11): "The sexual appetite is as natural and as imperious as that for food and drink." But I also think, with a shudder, of the unborn generations who suffer innocently the consequences of their fathers' and sometimes mothers' *appetite.*

In all this I confess myself unable to discuss the matter from a theological aspect, and I regret to say that I fail utterly to see why, on page 12, you bring in the Deity and abstruse theological statements.

In speaking of the preponderance of women in the Eastern States, you make them three hundred thousand in excess of men, and, with commendable charity, doubt whether they are "implacably wicked if they sometimes yield." This you support by quoting Miss Phelps, who says "no man can realize the agonies women suffer from fifteen to thirty"; that is, from the nubile age to marriage. I do not hesitate to say that the majority of practitioners will agree with me in the assumption that fully one half of American girls know nothing of the sensations so graphically stated by a *Miss.*

I have not the slightest desire to be flippant in so important a matter, and therefore resume my objections to the essential part of your paper, only in the hope of bringing such acknowledged thinkers as you to what I deem correct ideas on the subject.

Again, let me put my protest against the statement, on page 13, where you advocate that even kissing, in a decent, orderly manner, should not be restricted. For obvious reasons, that require not even a mention among physicians, kissing—decently, orderly, or the reverse—should be viewed as in Japan, as preliminary to or co-existent with sexual intercourse. Naturally, I exclude from all consideration in these matters the sacred parents' kiss.

While I thoroughly agree with you that our politics could be vastly purified and elevated by breaking down the barrier that keeps women from the polls, I think you could have carried out the idea better by making an intellectual qualification the sole title to the exercise of the right of suffrage. But, dear Doctor, do you not think it would be a very dangerous scheme to have political caucuses held in churches? One of the principal reasons for my pride in this, my adopted country, is its absolute freedom from church influence in its politics; and, if the politicians were not so very capable of taking care of themselves, I would really beg you not to speak of their "wallowing in a filthy pool." I agree with you that, instead of lowering woman by allowing her to participate in the political arena, it would undoubtedly elevate man.

In brief, dear Doctor, I take it from your paper that you propose solve this extremely difficult question by education, and undoubtedly can be done. Unfortunately, though, it is a repetition of that instanc when some other celebrated member of the profession to which I hav the honor to belong, and of which you are an ornament, was asked b a good lady: "Doctor, is it not true that physicians are usually calle too late?" "Yes, Madam; two or three generations too late."

Your proposition of curing or even mitigating the evils of prostit tion by education would certainly be received in the most curious ma ner by the prostitutes of to-day; and then, would it really subserve a ends? for do you not say, on page 15, that those high in Church a State figure in courts of law as transgressors? And, of those defen ants that thus figure, are not the majority really educated people?

No, Doctor, I would go further in this matter than ever has bee done, to my knowledge. I would start out with the firm convictio that there is no human being, not one of God's creatures, that is real irretrievably lost.

My experience in the tropics, where but once a feeble effort w made to control prostitution, leads me to submit through you to thin ing people, in and out of the profession, the following rough outline a means of regulation, based upon the ideas before sketched in brief:

1. Houses of prostitution should be limited to one specific distri of the city, where no schools or factories should be allowed to exis and thus young people not be exposed to the debasing influences th the atmosphere of immorality carries with it.

2. I would compel every woman who offers her body for sale advertise that fact. In Sweden it was done, and perhaps is still, compelling prostitutes to wear caps of two distinctive colors.

3. I would subject every prostitute to a semi-weekly vaginal exam nation.

I may here interrupt the recital of what I believe ought to be don by stating that the Woman's Hospital of St. Louis was erected at a co of $200,000, the results of the fees that for less than two years we paid by prostitutes in that city previous to the abrogation of the "Soci Evil Law," which yielded to the influence of clergymen and wome mainly because of the "humiliation to which prostitutes were expose by the semi-weekly examinations." Though I have grown over twel years older since that argument exercised such a powerful influence, still fail to see how any humiliation is inflicted by the professional co duct of a dignified physician upon females who oftentimes, for a ve small pecuniary consideration, submit to what is really debasin Again, is it not a fact that, during the twenty months that the law w enforced, more prostitutes became decent women than ever before since? The returns to virtuous life were brought about principally the kind treatment which these unfortunates received when sent to t hospital by force. And is it not a fact that to this day the prostitut of St. Louis employ the majority of the same physicians formerly a pointed, and voluntarily pay the fees for examinations and advice th they formerly were compelled to give? Do these facts not show th the unfortunate prostitutes have a protection in the law which supe ficial people do not understand?

Again, it has been argued that there is an injustice implied in ma ing the woman the only sufferer from the results of her vice. It is m conviction that, if the true motives of the majority of prostitutes f throwing themselves into the street are elicited, it will be found that very small fraction thereof became prostitutes from love or lust, b tween which I think you must agree with me there is so wide a diffe ence. I deem myself safe in stating that but very, very few of t women who have desecrated their name took the first step in vi through anything like romance. Incorrigible laziness, insane cravi for finery, and bad example are certainly the actuating motives in t majority of instances. Undoubtedly in a large number the attractio of a pseudo-gay life have proved the incentive.

Those who have taken the unfortunate step that leads to far mo than hell is painted to be are in it but a short time before they lea their error. Should we take from them the hopes of reclamatio Should we crush out the choking, struggling spark of womanhood placidly folding our hands and saying: "Had she been educated s would not have been a prostitute"?

No; let us segregate her. Is she harmed thereby? Is she n already an outcast? Shall we, from a false sentiment, expose innocent girls to her vile influence.

Let us compel her to advertise herself. Will it do her more harm to oblige her to wear a parti-colored cap than allow her to stand at her doorway or in her window, or tramp the streets, offering herself to pander to even viler forms of vice than that which those who do not live in large cities imagine is the sole avocation of the prostitute?

Let her be regularly examined, to prevent her continuing to exercise wholesale murder, and let us not hesitate to do this from the wrong idea that her partner in sin should be subject to an equal examination. This would be decidedly impracticable, for with the number of prostitutes that ply their avocation in our cities it can be done, while those who seek to gratify their lust with these prostitutes are so excessive in number that, despite the numerical strength of our profession, we should not find physicians enough to carry out the examinations of males.

And, when a prostitute is found infected with a venereal disease, she should be prevented, as far as possible, from communicating it. But while in hospital, when away from the presumed attractions of a "fast" life, when with the remorse that among the lower classes only physical suffering can bring (and, perhaps, also among the higher classes), then would be the time for successful, well-directed, kindly efforts to fan into flame the womanhood that is dying. This should be the guiding motive, and naturally the people in whose hands it would be placed should be selected because of their probity.

I would not do violence to the generally accepted opinion that those most familiar with matters theological are the best qualified to judge of matters moral; but incidental to their efforts of reformation is, unfortunately, the tendency to fill these poor creatures with the idea that they are horrible sinners, and they paint to them Almighty God anything but the good Father who opens His arms to them that they may come to Him and forget their errors of the past. The prostitute can not be reformed by tracts which she laughs at, or prayers that she reviles. They mean nothing to her. I feel confident that there are but few prostitutes who, if given an opportunity to earn a decent living, would not do so in preference to continuing their immoral lives.

I would strongly reprobate any crusade or concerted effort to sing or pray the soiled doves back to the arduous path of virtue. A quiet method, even if managed by a person who does not know how to utter a prayer, would be preferable to the hysterical schemes that have been attempted, and which are so prone to lapse into the erotic.

I believe it due to myself to state that I am not a candidate for an appointment to any such unsavory occupation as I have detailed, and, even did my practice not suffice to sustain me, I would rather essay other modes of gaining a livelihood. But I deem it a duty we owe to humanity to relieve mental and physical suffering, and to prevent it wherever we can, and to that end I have written this letter, the essentials of which it will afford me pleasure to discuss with you in detail, privately or publicly, as you may deem fit. If, then, a mitigation of the social evil is accomplished through the influence that your dictum must wield, I shall be amply repaid for my efforts in this regard by the consciousness of having been a successful collaborator.

I am yours very respectfully,

Ferd. C. Valentine.

215 West Forty-eighth Street, New York, *August 31, 1886.*

Dr. S. Solis-Cohen's Remarks on Aconite, in the discussion on Dr. Shurly's paper, printed in our last number, were perverted by erroneous punctuation so as to make it appear that Dr. Solis-Cohen used aconite for cleansing the secretions from the larynx. On page 287, second column, the semicolon after the word "condition" (twelfth line) should have been omitted, and the comma after "larynx" (thirteenth line) should have been a period, the phrase "I have used aconite," etc., beginning a new sentence.

Dr. Joy Jeffries on Medico-legal Cases in Ophthalmology.—Dr. B. Joy Jeffries, of Boston, writes us that the histories of cases presented by him at the recent meeting of the American Ophthalmological Society did not refer entirely to color-blindness, as we stated, but that, of the whole number (twenty-six), fourteen had reference to the form sense, and only twelve to the color sense.

THERAPEUTICAL NOTES.

Carbolic Acid in Erysipelas and Lymphangeitis.—Kühnast having written an article on the treatment of erysipelas with multiple puncture of the skin followed by the application of phenol bandages, Hofmokl ("Wiener med. Presse," 1886, No. 11; "Ctrlbl. f. Chir.," August 28, 1886) remarks that since the year 1878 he has treated ambulant erysipelas with lotions of phenol in a two- to five-per-cent. solution, and with compresses wet with the same. After thoroughly cleansing the skin, he applies a compress covering an area extending a hand's breadth beyond the borders of the affected skin. In adults the compress is wet with a three- to five-per-cent. solution of phenol, and in children with a two- to three-per-cent. solution. The compress should be covered with some waterproof material, and kept carefully in contact with the skin by means of a bandage. The dressing is changed at the end of one or two days. It is a common thing for the urine to show the smoky tinge characteristic of the absorption of phenol on the second or third day, but this has no special significance. In case of large open surfaces, these should be covered before the compress is applied. The author considers the punctures unnecessary. The method is not so convenient of application to the head or the trunk as to the limbs, and it is unsuitable for the face.

Konetschke, writing on the same subject (*Ibid.*), says that he has the affected surface and the neighboring parts gently but thoroughly rubbed every hour with pledgets of lint soaked in a ten-per-cent. oily solution of phenol, special care being taken in the case of the scalp. In more than twenty cases he has thus prevented the extension of erysipelas, in all of which the disease was checked and the fever overcome in two days at most.

Calomel as a Diuretic.—Dr. D. J. Leech contributes to the "Medical Chronicle" for July, 1886, an abstract of a paper on this subject by Jandrassik ("Dtsch. Arch. f. klin. Med.," xxxviii, 1886) in which the statement is made that calomel has a powerful diuretic action in cases of anasarca. In one case 330 ounces of urine were passed in twenty-four hours. If purgation is produced, the diuretic action is diminished or lost, and an opiate is called for; yet the author used jalap with the calomel. The explanation given of this action of calomel is, not that it acts on the kidneys, but that in some way it causes the absorption of the effusion into the blood, and that then the kidneys, provided they are healthy, undertake the work of getting rid of it. "If Jandrassik's views as to the efficacy of calomel as a diuretic are confirmed," says Leech, "the great value of the well-known pill consisting of blue pill, digitalis, and squill will be readily comprehensible."

Bromide of Arsenic in Diabetes.—Moock ("France méd.," Feb. 25, 1886; "Glasgow Med. Jour.," July, 1886) reports the case of a woman fifty-four years old, who had probably had diabetes about four years, and who also had phthisis in the stage of cavity. She was much troubled with itching of the vulva. Small doses of bromide of arsenic were given, together with iodoform, and in two weeks the pruritus had entirely disappeared and the chest symptoms were much ameliorated. At first she was given gluten bread, but afterward she was allowed ordinary bread toasted. The improvement continued steadily for two months, at the end of which time the amount of sugar passed in the urine had been reduced to not much more than one twentieth of the original quantity, and the chest symptoms were quite checked, although a cavity, of course, remained.

Dr. N. S. Davis ("Jour. of the Am. Med. Assoc.," May 8, 1886) has reported excellent results with bromide of arsenic in conjunction with a strict anti-diabetic diet.

Oil of Turpentine in Scrofulous Ozæna.—Malacrida ("Gazz. degli Ospit.," Mar. 7, 1886; "Ctrlbl. f. Chir.," July 17, 1886) reports the case of a girl ten years old who had ozæna of long standing which had long been under treatment in vain. Taking a suggestion from the cure of old fistulous tracts with oil of turpentine, the author used this drug locally, and gave the patient a supporting diet. Cotton tampons moistened with a few drops of the oil were introduced into the nose. As they caused considerable irritation, those subsequently used were wrapped with dry cotton. A perfect cure took place in a week. Five other cases treated by the same method are mentioned, in none of which was the cure delayed longer than a month.

THE NEW YORK MEDICAL JOURNAL, September 25, 1886.

Original Communications.

HOBBIES IN GYNÆCOLOGY,
AND
THE IMPORTANCE OF AVOIDING THEM.*

By T. E. AXTELLE, M.D.,
WATERBURY, CONN.

In selecting this subject I have no desire to be or to seem dogmatic, or to indulge in unfriendly criticism of any personal theories or methods of practice. I have selected it because it has seemed to me that harmony and progress in gynæcology are seriously crippled by a great confusion of discordant and antagonistic theories, each of which has its advocates and opponents, and perhaps its merits and demerits.

I have no expectation that I shall be able to instruct you, but only cherish the hope that what I have to offer may prove sufficiently interesting to be worthy of your attention.

Should I give expression to any opinion which may seem to savor in the slightest degree of disrespect toward those who are accustomed to be regarded as authorities, it will not be because I cherish any such feelings, but because I believe that the blind and unqualified worship of *any* teacher is injustice to ourselves and often detrimental or even dangerous to our patients.

Many of the hobbies of gynæcology spring from the highly human tendency to be dogmatic and self-opinionated. The young physician, especially if he has been fortunate enough to secure a hospital experience, has also often been unfortunate enough to secure with it a liberal allowance of egotism. He is delighted with himself and ridicules the opinions of the older practitioners as absurd, and treats them with disrespect, sometimes with contempt. He is apt to conceive certain ideas or notions, either by more or less observation and experience or merely by accident, and these he cherishes until finally they assume to him the importance of valuable principles, not so much on account of any merit they possess as because he flatters himself they are original; they are "his theory" or "his method." In this way he elaborates a theory without ever taking the time or pains to subject his views to the critical test of practice and analysis, to ascertain whether they have any foundation in fact or are merely notions.

Should any one take the trouble to attack one of these pet theories, he considers himself obliged to defend his position, and the result is frequently a "war of words" in the columns of some one of our medical journals, a contest which in some cases at least might well be characterized as "much ado about nothing." The point at issue often being of little consequence—however much it may be magnified—is soon exhausted and the discussion degenerates into bitter personalities which are unworthy of professional men. This latter point was fairly illustrated in a recent discussion between two of our medical brethren as to the relative value of two particular kinds of electric batteries, in which we learned quite as much of their personal opinions of each other as of the relative merits of their instruments.

We naturally attach undue importance to our own opinions and detract unduly from the opinions of others, and this often blindly and without reason. Although this fact is true of men in every walk of life, yet it seems to me to be especially a weakness of medical men.

So soon as we differ with a fellow-practitioner we at once cast about to fortify our own position instead of honestly comparing our doctrine with his to find which is most tenable. How common it is to find doctors, and especially young doctors, entertaining a certain amount of contempt for the opinions of almost all of their fraternity! This is conceit without wisdom. Only a faithful disciple makes a good teacher. This self-worship or egotism gives rise to a class of hobbies which have about the same relation to science that noise has to music. It also leads to those bitter castigations and belittling criminations and recriminations which so commonly find a place in our journals. When we consider our personal weaknesses, our universal fallibility, our inability to cope with many diseases, our frequent, sometimes fatal, errors, we certainly have reason to humble rather than to exalt ourselves. "Truly, charity becometh us all." Happily those hobbies which are the outgrowth of egotism are generally of little consequence and of ephemeral existence. They usually remain the property of their inventor, who enjoys an exclusive right without the necessity of letters-patent.

A second source of hobbies is the "writing mania" which affects the younger members of the profession. Each one is eager to bring himself into notice in some way, and to do this he generally writes a paper or book in which he evolves his own new theory, forgetting that every theory should be the outgrowth of a sufficiently extended experience.

As Dr. Thomas expresses it, "Every newly fledged specialist feels warranted in elaborating and maintaining a theory of his own."

Dr. Mary Putnam Jacobi says: "The individual empiricism which necessarily stamps the origin of an art or a science still clings to the expressions of doctrine in regard to the diseases peculiar to women. As a consequence, each writer and observer, I might even say each practitioner, desirous of public fame in this department, seems to aim principally to set forth his own personal experience and the opinions based on that. It is from the aggregate of these that solid doctrine will ultimately be elaborated; but in the mean time practitioners must be wafted about on every wind of theory" ("Am. Jour. of Obst.," vol. xviii, p. 36).

We not infrequently find the young gynæcologist write a monograph tabulating a few cases in which with considerable ingenuity and enthusiasm he professes to establish his so-called "theory." Another will cite an equal number of similar cases, and with equal ingenuity and enthusiasm pretend to establish a theory which is just the opposite of the former.

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* Read at the second meeting of the Alumni Association of the Woman's Hospital.

Now, as it is impossible for two sets of similar cases to illustrate two theories which are diametrically opposite, it follows that at least one of the writers found his theory first and then fitted his cases to it.

Blind faith in any teacher or doctrine is a barrier to progress, but we should first prove the old to be false, then prove the new to be true. We should not hasten to destroy the "ancient landmarks" of our profession unless we can substitute something better in their stead.

Gynæcology has become a fashionable specialty and is now at its "flood," and offers many temptations to young men to bring themselves into notoriety by attaching their names to certain instruments or operations; hence the great flood of literature describing with enthusiasm some trifling hobby such as "my scissors," "my operation," "my method," "my modification," "my improvement," etc., not in many cases from the well-founded conviction of any inherent merit in the thing set forth, but from a feeling of obligation to write something.

Does not candor compel us to admit that a great portion of the literature of gynæcology of to-day is furnished by those who are unqualified to speak with authority? I would not discourage writing by the younger men, but it is not necessary for every writer to develop "a new theory." What we need more than anything else is to observe carefully and conscientiously what is brought before us and do everything in our power to make our practice successful. If this is continued long enough, we shall honestly earn the right to a theory and the ability to maintain it.

The late Professor W. H. Van Buren believed, with regard to writing, that a doctor was in danger of growing too old to write before acquiring sufficient knowledge or experience to write a valuable book.

Dr. Abraham Jacobi, in his memoir of the late Professor Austin Flint, states that Professor Flint did not write a book until he was fifty years old, and that some of the younger members of the profession might learn a valuable lesson from this fact.

On questions of pathology and therapeutics there is a very wide variance among leading gynæcologists, and the random firing of the lesser lights only serves to thicken the confusion. Every man who adopts a hobby is apt to do injustice to the views of others upon the same subject, for the reason that in proportion to the persistence with which he rides his own hobby will he be prejudiced against all theories which are in opposition to it.

A third and by far the most numerous class of hobbies ridden by gynæcologists is due to the unsettled condition of uterine pathology. Here there is no unity. When we consider the various views entertained upon this subject we can not wonder at the fact, so often forced upon us, that one author will maintain the special efficacy of some particular method which is as freely condemned by others equally well qualified to speak with authority.

The various theories of uterine pathology are almost as numerous as the authors on the subject of gynæcology.

Dr. Thomas states that "nothing more decidedly retards the progress of gynæcology than the unsettled state of uterine pathology. This whole subject presents the melancholy aspect of uncertainty and dissension" ("Diseases of Women," fifth edition, p. 55).

Playfair says: "What are we to think of gynæcology as a scientific pursuit when one eminent author informs us that all uterine symptoms whatever are the result of flexions, while another, equally eminent in his way, has recently assured the profession that, while he has no experience in the use of pessaries, he has a very large experience in their abuse, since the greater part of his time is taken up in removing pessaries that have been introduced by others?" ("Trans. of the Obst. Soc. of London," vol. xx, p. 340, 1878.)

Depaul expresses himself thus: "In these conditions, discussions are eternal and end in nothing. It is sad to say it, but uterine pathology, though assiduously cultivated by the specialists, still resembles a field imperfectly planted." (Review of Depaul's report to the French Academy of Medicine, on "Uterine Deviations.")

In consequence of this incongruity in the field of pathology, one author attributes everything to metritis, another to endometritis, and so on through oophoritis, salpingitis, cellulitis, displacements, subinvolution, etc. Dr. Thomas (*loc. cit.*, p. 57) says: "In the very large majority of uterine diseases the first link in the morbid chain is subinvolution, which produces as a direct consequence passive congestion, hypersecretion by the lining membrane, menstrual disorders, displacements, sterility, and interference by pressure with neighboring organs." He recognizes other causes than subinvolution, but makes this the starting-point in *a very large majority of cases.*

As is well known, Dr. Emmet attributes almost all uterine symptoms to perimetric cellulitis, or, as he now expresses it, "pelvic inflammations"; and that he never permits any one under his tuition to become unmindful of this fact will be readily attested by every interne of the Woman's Hospital.

Dr. J. H. Bennet makes metritis the starting-point of most of the affections of the uterus, but maintains that metritis is generally limited to the neck, and rarely affects the body of the uterus.

Tyler Smith says: "It is my conviction, notwithstanding, that in the majority of cases in which morbid states of the os and cervix are present, cervical leucorrhœa, or, in other words, a morbidly augmented secretion from the mucous glands of the cervical canal, is the most essential part of the disorder, and that the diseased conditions of the lower segment of the uterus, which have been made so prominent, are often secondary affections resulting from the leucorrhœal malady."

Graily Hewitt says: "Patients suffering from symptoms referable to the uterus are almost universally found to be affected with flexions or alterations in the shape of the uterus of easily recognized character but varying in degree."

"The change in the form and shape of the uterus is frequently brought about in consequence of the tissues of the uterus being previously in a state of unusual softness, or what may be often correctly designated as chronic inflammation."

"The flexion, once produced, is not only liable to perpetuate itself, so to speak, but continues to act incessantly as the cause of the chronic inflammation present."

Dr. Tilt, of London, holds that the great majority of pelvic diseases in women originate in morbid ovulation. He avers that morbid ovulation produces oophoritis, and this again reacts upon the uterus, and thus leads to, or causes, most uterine affections.

Lawson Tait, as you all know, is disposed to attach much more importance to the Fallopian tubes, both as to the part they act in menstruation and as disease-producing agents, than has ever been done by any other gynæcologist.

There is no better illustration of the great diversity of opinion among American gynæcologists than the single question of the operation for the repair of the lacerated cervix uteri. By reference to the paper read by Dr. Zinn before the American Medical Association at New Orleans in 1885, you will see that almost every possible position is occupied with regard to this operation among the leading specialists both in this and in foreign countries. Although the operation has been done by Dr. Emmet since 1862, and is done by many other operators in this country, yet we have many leading men who do not admit the importance of laceration of the cervix as a factor in uterine pathology, and never do the operation. It is comparatively little known abroad, and is almost exclusively limited to American gynæcology.

At the Woman's Hospital the lacerated cervix is closed by all the surgeons except Dr. Bozeman, who does not recognize its existence to the extent of requiring repair. He designates this condition of the cervix as eversion.

Dr. Tilt evidently views the operation with contempt. In the introduction to his work on "The Change of Life in Health and Disease," he states that Dr. Emmet is now engaged in sewing up the cervices which Dr. Sims had divided. It is sufficient to say that Dr. Tilt is either culpably ignorant or deliberately unjust. There is a wide difference between dividing the cervix in a case of anteflexion with so-called obstructive dysmenorrhœa, as Dr. Sims did, and repair of a laceration caused by parturition, as Dr. Emmet does. To say the least, Dr. Tilt cherishes a blind and illiberal prejudice. Those who have recently served as internes in the Woman's Hospital will remember the different views entertained by the surgeons of that institution with regard to anteflexion with dysmenorrhœa. Dr. Emmet attributed both the anteflexion and dysmenorrhœa to pelvic cellulitis, and treated the cellulitis with hot douches and iodine, then lifted the uterus up by a retroversion pessary. Dr. Thomas regarded the dysmenorrhœa as obstructive, and treated it by dividing the cervix and introducing an intra-uterine stem supported by a cup-pessary.

Dr. Bozeman, whose pathology on this subject was less strictly defined, attributed the condition in some cases to metritis, in others to endometritis, and in still others to pelvic inflammation. His treatment consisted of hot-water douches, iodine, or carbolic acid, the "cotton column" or "tamponade," and finally, perhaps, his soft rubber pessary, known in the hospital as the "jockey-cap." Not a few cases resisted all of these methods, showing the necessity for some other pathological explanation or some other line of treatment.

Just at present the most fashionable treatment of dysmenorrhœa due to anteflexion is divulsion of the internal os. The chief exponents of this measure are Professor Goodell, of Philadelphia, and Dr. W. Gill Wylie, of New York. Not a few, and especially Dr. Emmet, have denounced this practice as harsh and unscientific, having no reasonable justification from a pathological standpoint.

When we see two surgeons of such confessed skill and experience as Dr. Goodell and Dr. Emmet differing so widely as these gentlemen do with regard to divulsion, we are led to inquire if there is not some middle ground which is more tenable than that occupied by either of them.

If the operation is justifiable, its advantages are all lost by the surgeon who rejects it. If it is unjustifiable, its evils are experienced by the surgeon who practices it.

There is probably no single point in the practice of gynæcology, as well as in its theory or pathology, upon which specialists differ more decidedly and obstinately than upon the operation for removal of the uterine appendages, the so-called Tait's operation. Here the opposing factions are headed by Lawson Tait on the one hand and Dr. Emmet on the other. The latter asserts that many women are unnecessarily unsexed by this operation—women who, by proper skill and patience, could be cured by local treatment. If we understand rightly, Dr. Emmet cures not a few women who undoubtedly would sacrifice their ovaries and tubes if in the hands of Lawson Tait. Dr. Thomas has recently stated at a clinic that many women are unsexed without any reason. I have more than once seen the uterine appendages removed and presented to Professor William H. Welch for examination, when he pronounced them normal.

Dr. H. C. Coe has lately read a paper in which he plainly shows that the uterine appendages are much less frequently the seat of morbid processes than is asserted by many leading men. He states that he not infrequently examines the ovaries and tubes submitted to him by surgeons, and finds them normal or practically so.

Here I may say again that the surgeon who makes Tait's operation a hobby will doubtless do much good and not a little harm, while he who denounces it will avoid its evils, but at the same time will lose those great advantages which in some cases can be secured by this operation alone.

A salient hobby in gynæcology, especially in abdominal surgery, is antiseptics. Most gynæcologists tell us that the peritoneal cavity can be safely invaded only under the strict use of antiseptics. Lawson Tait refutes this by showing the most brilliant results in abdominal surgery that are furnished by any surgeon in the world, and he attributes his success, in part, to the fact that he has abandoned the use of antiseptics. This certainly shows that much of the vaunted potency of the so-called antiseptic drugs has been only a delusion.

I shall not dwell at greater length upon special hobbies. Every gynæcologist of any prominence has his hobbies which he rides with all the obstinacy of a strong-minded man. Some shut the doors against improvement by a blind devotion to their own dogmas and a blind prejudice against everything else. It needs little thought to convince us that the scope and usefulness of our specialty have been and may still be much curtailed by cultivating personal hobbies.

The theories of uterine pathology and therapeutics are so numberless and so discordant that the young gynæcologist is reduced to the necessity of adopting one of two courses—viz., either to blindly adopt the faith of some favorite teacher, or to undertake the mammoth task of "proving all things and holding fast" only "that which is good."

To modify somewhat the language of Sir James Sawyer, let us hope that in gynæcology the time may soon come when in all essential things there will be unity, in trifling things liberty, and in all things charity.

DESIGN FOR AN ISOLATING PAVILION,

FOR USE IN CONNECTION WITH A HOSPITAL, OR AS ONE OF A SERIES OF COTTAGE HOSPITALS.

BY FREDERICK A. CASTLE, M. D.

ABOUT two years ago the board of managers of one of the hospitals in this city requested of the medical board suggestions respecting the arrangement of a building in which to isolate patients whose cases are not suitable for treatment in the general wards. I had the honor to serve on a special committee of the medical board which had this subject under consideration, and drafted the accompanying plan, which was accepted by the committee, approved by the medical board, and reported to the board of managers. Circumstances have prevented any further action in the matter on the part of the managers.

As the relative importance of small, isolated buildings compared with large hospital wards in the management of some diseases and in the successful practice of certain branches of surgery is pretty generally conceded, I have thought that the publication of this plan might be of general interest, as it represents considerable study, and possesses some features which I believe to be novel. The accompanying illustrations will show the general plan of arrangement. Four wards, 16 x 16 feet, are grouped about a room 8 x 21 feet, which serves as a means of communication, as temporary quarters for a nurse, and for the location of a water-supply, sinks for slops, and lockers for medicines, nursing appliances, linens, etc. Each of these rooms is entered from a vestibule opening to the outer air, so that there is no direct communication between any two of the rooms. At the same time the dis-

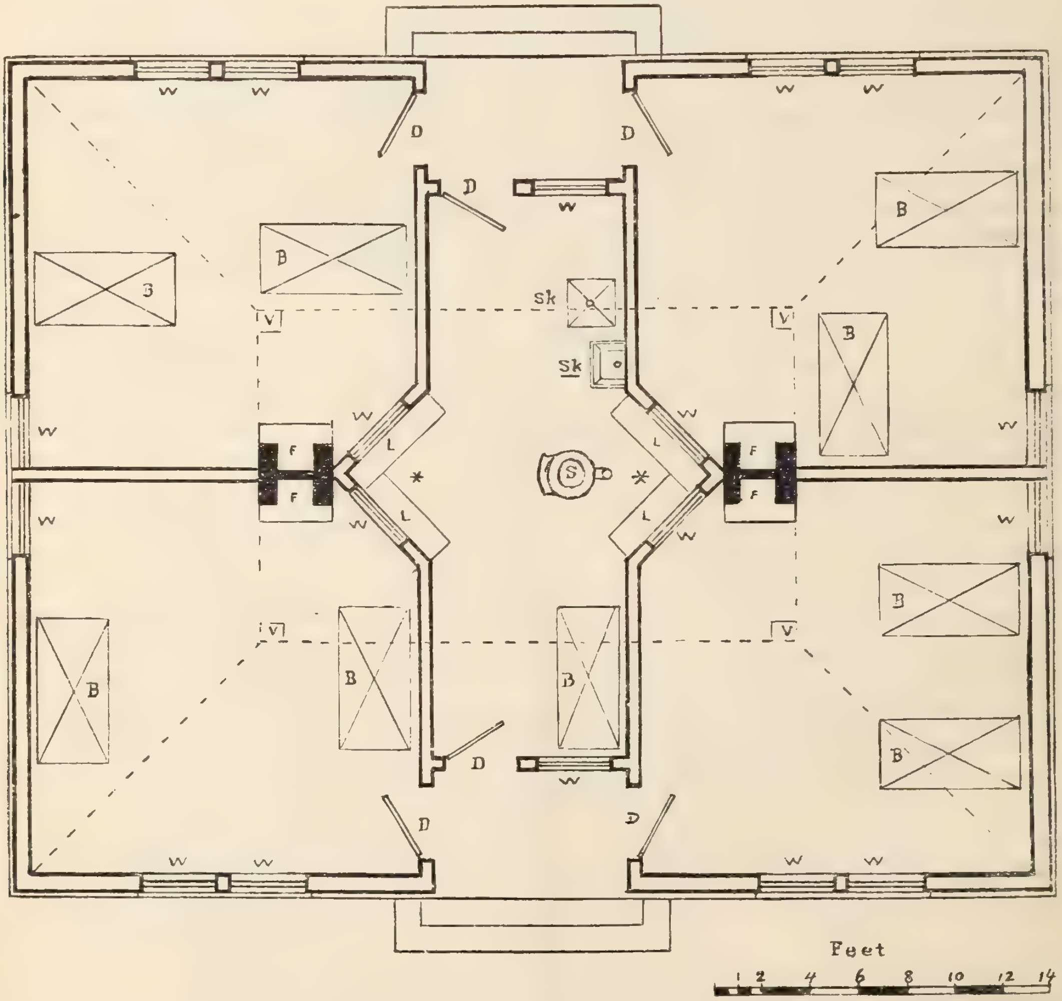

FIG. 1 DESCRIPTION OF PLAN.—*B*, bed; *D*, door; *F*, fireplace; *L*, locker; *S*, stove; *Sk*, sink for emptying bath-tub; $\underline{Sk}$, sink under water-faucets; *V*, ventilator in ceiling; *W*, window; the dotted lines indicate the angles of the ceilings; *, location of gas-jet or hanging lamp.

tances to be traveled over are so short that the labor of administration is not great. To enable a single nurse to have all the beds under immediate observation, windows are so arranged in the partitions between the central room and the wards that, without leaving her room, the nurse can see every bed and its occupant, no matter where it may be placed. These windows are not intended to be capable of being opened. Each patient's room is provided with a fireplace, which can be used if needed, but it is intended that the heating in cold weather should be by steam, supplied to coils located in each room under the windows, from the boiler in the administration building. In situations where steam-heat is not readily available, and a fireplace is not capable of furnishing sufficient heat in cold weather, an earthenware stove, such as is commonly used in northern Europe, might be introduced in place of each chimney, and so arranged as to be operated from the nurse's room, as shown in Fig. 3. These stoves are often provided with open chambers at the sides, around which the fire and smoke circulate, and they would be very useful in a sick-room for keeping food warm, vaporizing disinfectants, etc. A stove should be placed in the nurse's room to heat it, and to furnish a fire when required for other purposes. When water is obtainable in pipes, a supply of hot and cold water should be provided at the sink marked *Sk*, but, when this can not be had, a pump at the sink and a large boiler with a faucet on the stove will take its place. A bath-tub on rollers is to be kept in the central room, which, after being filled at *Sk*, can be rolled into any of the other rooms. At *Sk* is a drain in the floor where the tub can be emptied. This drain receives the outflow from *Sk*, and, with the water-pipes laid on at *Sk*, is the only plumbing work intended. A proper trap at *Sk* will be the only precaution requisite, and even if gases *should* escape they can not gain access to the wards. No water-closet is provided, it being the intention that the nurse should use the one provided for nurses in the administration building. The patients should use a close-stool or bed-pan, and the discharges should be removed at once from the building and deposited at some distance from it. The stove in the nurse's room should have a flue provided for it in the nearest chimney. Under the windows between the nurse's room and the wards are located the lockers for holding bed-clothing, towels, medicines, nursing appliances, etc. (*L* in plan). To light the rooms at night, two gas-jets or lanterns should be suspended in the alcoves at the points marked by stars. The advantages of thus placing the lights are that they can only be regulated by the nurse, the products of combustion can not escape into the air of the sick-room, the nurse, when standing under either of them, can see every part of both rooms on that side, and the beds can be so arranged that the light need not fall directly on the face of a sleeping patient. This is also the most economical arrangement possible.

According to the design, the outer walls of the wards are nine feet high. The ceiling follows the slope of the roof until it reaches a point twelve feet from the floor, when it becomes horizontal (the lines of the angles of the ceiling are shown in the plan in dotted lines). Where the three surfaces of the ceiling in each room join, the scheme provides for a ventilator opening through the roof, and capable of being opened and closed by means of depending wires. The doors should all be made in upper and lower halves, so that the upper half may be opened and a draft along the floor be prevented by the lower half. In rainy weather, the lower half being closed will also prevent rain beating in through the vestibule.

If the occasion demands, male patients can be placed in the rooms opening into one vestibule, and female patients in the other rooms, and thus be as thoroughly separated as if they were in distinct buildings, or separate floors of one building. So, too, the arrangement here proposed will permit any one of the rooms being thrown out of use for repairs or disinfection, without disturbing the usefulness of the others.

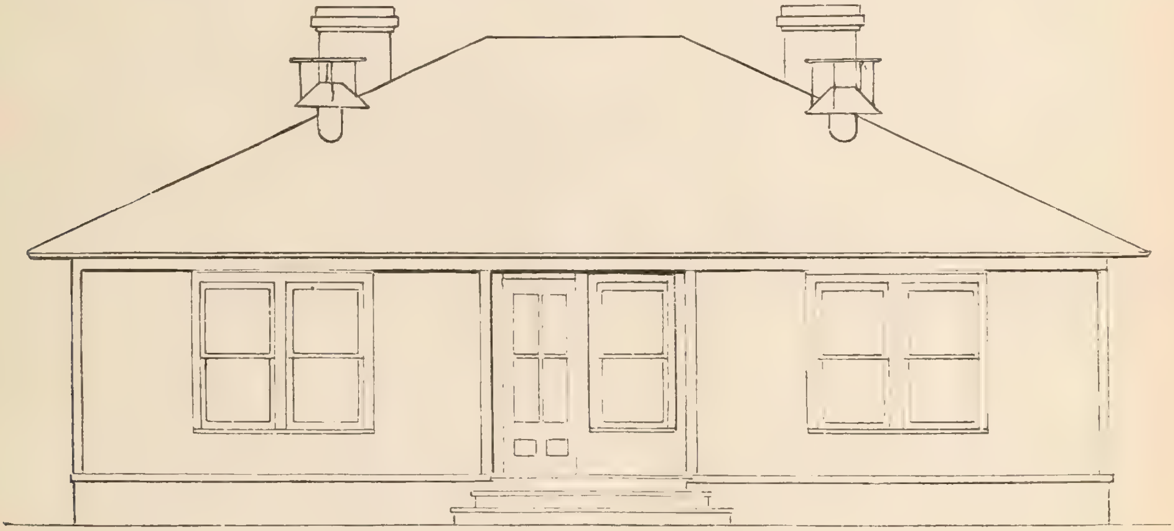

FIG. 2.

I have represented a bed in the nurse's room, not because this room is intended to be the permanent quarters of a nurse, but to show how one can be introduced when the nature of the service requires that the nurse on duty at night should have an assistant within reach. For use in the day-time (or at night in emergencies), a bell-pull in the nurse's room should connect with a bell in the administration building.

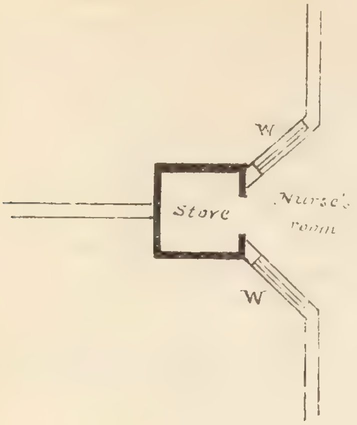

FIG. 3.

It may be thought that the juxtaposition of two windows on the sides may afford some chance for the transmission of bad air from one room to the one adjoining, when both windows are open. While it is, perhaps, possible, it is hardly likely to occur with the most ordinary precaution. To offset this is the advantage derived from having the corners of the rooms well ventilated. It will be noticed that three of the four corners of each ward are capable of being thoroughly ventilated by this arrangement, and the saving in continuous wall-space greatly increases the facilities for arranging the beds.

I have represented each sick-room as containing two beds. As the superficial floor space is about 250 square feet and the contents of each room about 3,000 cubic feet, this would not be overcrowding in most cases. In special cases the entire room could be devoted to one bed.

I have attempted nothing in the way of architectural ornament of the exterior, as this can very well be left to those more competent than I am to handle this part of the subject. I would suggest, however, that a desirable modification of the roof would be a projection of the eaves over the steps as a protection for the latter, and as an improvement upon the unbroken line of the lower edge of the roof.

NEW YORK, *May, 1886.*

A CLINICAL REPORT OF CASES TREATED BY PNEUMATIC DIFFERENTIATION.

BY HERBERT F. WILLIAMS, M. D.

(*Concluded from page 322.*)

Dr. Robert H. Babcock, of Chicago, writes as follows:

"*April 5, 1886.*

"Herewith I send you a report of two cases which I have treated by means of the cabinet:

"I have used the pneumatic differentiator for three months, chiefly in the treatment of pulmonary tuberculosis, and, although my results have not been brilliant, they are to me encouraging. I shall speak of only two cases. These patients came to the Throat and Chest Department of the South Side Dispensary and were selected because of the hopelessness of accomplishing anything by internal treatment. At the same time the usual internal remedies considered appropriate in such cases were not abandoned upon the resort to the cabinet, and in estimating results this fact must be kept in mind.

"CASE I.—Mary R. gave following history: Aged thirty, Irish, unmarried, a house servant, began to have a dry cough fourteen months ago, and two months later to expectorate. Eight months ago she ceased to menstruate. Her condition has grown steadily worse until present time. She is now tormented day and night by a hard cough and profuse muco-purulent expectoration; is very weak, has daily fever and night-sweats, no appetite, and complains of much pain across the front of the chest; has no diarrhœa. Upon examination of the chest, consolidation of both apices, particularly of the right, was discovered, together with considerable retraction of the anterior border of both lungs. The only râles heard were pleuritic friction-sounds at either side of the sternum. Her temperature was 100° F.; pulse 92, very weak; respirations shallow, but only 20 to the minute. Treatments with the cabinet were begun January 30th, and continued almost daily except Sundays until the 17th of February. She then remained away until March 1st, when she reappeared with the statement that her menses had returned the 18th of February—that is, the day following her fourteenth treatment. The day of her reappearance her temperature was $99\frac{3}{5}$° F., respiration 18. March 9th, it is noted that she had gained one pound in weight. She now came very irregularly for treatments, receiving only seventeen between March 1st and the 24th of April. She reported considerable diminution in the frequency and severity of her cough, a lessened expectoration, slight improvement in appetite, and entire disappearance of the pain in the front of the chest. She was obliged to work far beyond her strength, sweeping, carrying coal, scrubbing the front steps, etc., all of which tended to retard improvement. After a discontinuance of treatments for a few days she invariably complained of increase in the severity of symptoms, notwithstanding faithful adherence to cod-liver oil and tonics. *Per contra*, she as invariably and emphatically testified to a feeling of relief and amelioration of symptoms after each resumption of treatments with the cabinet. In her case a rarefaction of four tenths was the highest she reached. A spray of the mercurial bichloride of the strength of 1 part in 1,000 was administered, and each treatment lasted about fifteen minutes. A physical exploration of her chest the latter part of March showed no improvement in the physical signs. Although in this case the environment of the patient was so very unfavorable and her treatments were from necessity so intermittent, I am yet of the opinion that the use of the cabinet kept her from losing ground, to say the least. Indeed, it is not beyond bounds to assert that as a whole her condition manifested slight improvement. That this was largely due to the cabinet is rendered probable by the fact stated above, that she always came back complaining of an aggravation of her cough and expectoration after an omission of treatments for several days, while after each return to the cabinet her symptoms became less troublesome.

"CASE II.—Matilda J. gave the following history: Aged thirty-three, Swede, unmarried, domestic, no family history of tuberculosis; was in good health until five months ago, with exception of some acute abdominal affection two years ago, for which she was in a hospital. Last fall she developed a cough while sleeping in a damp basement. Since then she has lost weight and strength, and is now unable to work. The cough is troublesome and expectoration is copious—muco-purulent. Examination of the chest disclosed slight dullness in the left supra-scapular and supra-clavicular regions, with broncho-vesicular respiration; no râles. Over the right side the resonance was impaired, except under the clavicle, where it had a vesiculo-tympanitic ring. Below the angle of right scapula, and passing forward into the infra-axillary region, the percussion note was duller than elsewhere. Here the respiratory sounds were faint and bronchial, being almost obscured by plastic exudation râles. Over other parts of the lung the respiratory sound was broncho-vesicular. Vocal resonance over this side was slightly exaggerated. Her temperature at 2.30 P. M. was 96$\frac{3}{5}$°, pulse 78, and respirations 21. The diagnosis was plastic exudation upon the pleuræ, with slight induration of right lung and slight tubercular induration of the left apex. Treatments with the cabinet were begun March 4th, while at the same time cod-liver oil and tonics were continued. March 15th, after eight treatments, each of fifteen minutes' duration, together with a spray of Lugol's solution, five per cent, the patient's cough had lessened considerably; she felt better generally, with less sense of constriction in the chest. By March 27th, after nine more treatments, she no longer complained of any trouble with her breathing, and her expectoration had become mucous. Her appetite had improved somewhat. At the date of this writing, April 6th, after eight more treatments, her general condition is manifestly improved, and she reports a gain in weight of one pound. Examination of the chest, however, reveals no apparent improvement in the physical signs, except that her ability to expand the chest is greater than a month ago, and the respiratory sounds are more audible. The râles remain as before.

"These two are the only cases in which the treatments were continued by the patients with any degree of faithfulness, and hence they are the only ones I report. As said already, the results are not brilliant, possibly not more favorable than it might be claimed would be obtained by proper hygienic and therapeutic management. Nevertheless, from these and my limited experience in my other cases I derive considerable encouragement. I should not think of relying on the cabinet to the exclusion of all other measures; it is in my opinion a valuable adjunct, and, indeed, it will help the patient acquire what he can not get alone—viz., the ability to inflate his lungs to an extent previously impossible. The benefit of this alone is too apparent to need discussion. This is of very great service in exactly those cases of plastic exudation upon the pleuræ to the disastrous consequences of which Dr. Leaming has called attention, and in which he recommends that the patients be directed to breathe as deeply as possible. In every instance of pulmonary phthisis I have noted the decided effect of this treatment in lessening cough and expectoration where the former was due to collection of secretions within the bronchi and not to laryngeal complications. Whether this be due to the increased force of the respiratory act alone or to the efficient administration of atomized solutions, which this method renders possible, this influence over cough and expectoration is of such marked benefit as to alone recommend the method. Without wishing to depreciate the value of the topical medication so efficiently achieved by means of sprays used with the cabinet, I am yet inclined to think that the benefit is mainly due to the mechanical effect of the treatment in causing a more active intra pulmonary circulation, combined with the stimulation of the mucous membrane of the larger bronchial tubes, caused by the more rapid passage over it of the air-current. Not only is the circulation within the pulmonary arterioles accelerated, thus bringing more blood into contact with the oxygen of the inspired air, but that in the bronchial and nutrient vessels is also hastened, a tendency to stasis within them is diminished, the bronchial mucous membrane is kept in a healthier state, the absorbents perform their function more actively, and the nutrition of the lung structure is improved. Were this alone and nothing more the result of treatments with the pneumatic cabinet, this were enough to recommend it to the profession. ROBERT H. BABCOCK."

Dr. E. L. Trudeau, of the Cottage Sanitarium, Saranac Lake, says:

"So far as I have gone I can bear testimony to the usefulness of this mode of treatment in certain forms of pulmonary diseases. It has seemed to me most beneficial in those phthisical cases where most good might be expected from expansion and consequent improved pulmonary nutrition, and that the results are much less satisfactory where localized antiseptic treatment has seemed the first indication to be fulfilled. Briefly, in incipient phthisis with apical lesions and slight constitutional disturbance, and in the various forms of chronic phthisis, but especially where malnutrition, debility, and dyspnœa are principally dependent on the evil effects of the contraction of connective tissue in the lung, its most brilliant field of usefulness is to be found. In rapidly advancing excavation and in scattered tubercular lesions it is of little avail. Most patients coming under the head of incipient and chronic phthisis treated by this method at the Saranac Lake Cottage Sanitarium showed more or less marked improvement. In one case a gain of seventeen pounds weight with an entire disappearance of all moist sounds in the lung occurred. Under its use, weight, breathing power, digestion, and occasionally cough improved; it had less effect on the fever and expectorations; slight hæmoptysis occurred in one case only. Very numerous observations showed that the tubercle bacillus and the putrefactive bacteria in the expectoration were generally unaffected by inhalations of 1 to 1,000 bichloride of mercury and five-per-cent. solutions of carbolic acid even when such treatment was continued for several months. In one case the tubercle bacillus disappeared temporarily. The study of this case, however, is still uncompleted. E. L. TRUDEAU."

Dr. Fernald and Dr. Cutts, of Washington, D. C., who have been using a cabinet for the past three months, write that, while they have treated a number of cases, sufficient time has not elapsed to justify them in making a general report. They have had one case, however, which they report in full:

"Sophie S., white, aged eighteen, single; seen by us for the first time March 16th, with following history: Has been losing flesh and strength for six months, during which time she has had an annoying cough, night and day; considerable expectoration, muco-purulent in the morning, at other times frothy and white; five months ago had one slight attack of hæmoptysis; slight daily hectic for last few weeks; night-sweats every night for past week; about middle of January applied at a dispensary for treatment for amenorrhœa; appetite fair; digestion good; sleep restless.

"*Family History.*—No phthisis; one uncle has asthma; father died of pneumonia.

"*Inspection.*—Fairly nourished; complexion sallow; under left angle of jaw an old cicatrix from scrofulous glands; no depressions or deformity of chest; both sides alike; heart normal; pulse, 90; respiration, 25; temperature, 99·8°, 4.30 P. M.; weight, 102.

"*Palpation.*—Slight increase of vocal fremitus below the left clavicle as far as upper border of second rib, and within mammary line.

"*Percussion.*—Slight dullness over the above-mentioned area and above the clavicle in addition.

"*Auscultation.*—Slight increase of vocal resonance over the dull area; jerky respiration (both inspiration and expiration) over whole upper third of left lung; abundant fine mucous râles and an occasional sibilant râle in same lung, in supra- and subclavicular space and in supra-scapular region.

"*Treatment.*—In addition to the treatment by the cabinet, she had been taking phosphatic emulsion for two months before coming to us, and continued to do so for two weeks later; by our advice she has taken a simple bitter before meals; at one time, early in the treatment, quinine was thoroughly tried to eliminate intermittent fever as a cause of the daily rise of temperature, but it had no controlling effect, and was afterward discontinued.

"She has had daily sittings except on a few occasions, when kept away by rain; has had thirty sittings to date; from the fourth to the twelfth sitting a preliminary rarefaction was made of two and a half inches for five minutes; since the twelfth, two inches for five minutes. Creasote was used in the spray for first nineteen sittings; since then Lugol's solution, either alone or with creasote; and on several occasions a few drops of pine-needle extract have been added. Patient breathed against one tenth of an inch for three minutes at first sitting; at each time after this the rarefaction was gradually increased until, at the eighth sitting, was able to breathe against four tenths for eight minutes; for the last eleven sittings, eight tenths for twelve to fifteen minutes, which seems to be as much as she can endure. Her condition began to improve from the first; has had no night-sweat since the third sitting; after the eighth sitting, has had practically no cough or expectoration; fever has gradually diminished, and for last ten days has had none; at no time since treatment began has temperature been found by us, at time of sitting, above 99·8°; at the eighteenth sitting she had gained two pounds, was sleeping and eating better, and in fact was better in every way. Her condition continued to improve, and at the twenty-seventh sitting her weight was one hundred and ten pounds, having gained eight pounds since her first treatment. Her complexion is clearer and her whole appearance is brighter and healthier. An examination of chest was made on the 24th instant (thirtieth sitting). Both sides of chest normal in every respect, except that jerky respiration at the upper part of left lung remains, but is now heard only on inspiration, and is confined to a more limited area.

"Respiration reduced to twenty on outside and eighteen inside cabinet.

"Yours very truly,
"H. M. Cutts,
"F. C. Fernald."

Dr. J. H. Blanks, of Meridian, Miss., sends a tabulated statement of twenty-seven cases, with diagnosis and result, and a sketch of two cases as follows:

	No. of cases.	Recovery.	Improvement.	No improvement.	Deaths.
Bronchitis	12	9	2	1	
Asthmatic bronchitis	1	......	......	1	
Acute phthisis, first stage	3	1	1	1	
" " second stage	1	......	1		
" " third stage	4	......	......	......	4
Chronic phthisis	4	......	3	1	
Unresolved pneumonia	2	1	1		
Total	27	11	8	4	4

"The cases reported in the death-list were all advanced. The patients were unable to walk unaided, greatly emaciated, with large cavities, and an evening temperature from 103° to 105°. One of them was under treatment four days only. The three others were greatly benefited. They expectorated freely after each application, could breathe easily, and were very much aided in procuring sleep. They were always greatly disappointed when they were prevented from any cause from receiving treatment, as they said they could breathe and sleep so much better.

"The history of one case of phthisis, under head of improvement, is as follows:

"Mr. M., aged twenty-two; best weight one hundred and fifty-eight; present weight one hundred and seventeen. Two brothers died of consumption and one of supposed pneumonia. Patient contracted measles sixteen months ago, since which has had a cough. Eight months ago had several hæmorrhages, and has rapidly declined since. He was first seen by me December 15, 1885, when the following notes were recorded:

"*Inspection.*—Shows marked depression in left subclavicular space.

"*Palpation.*—Increased vocal fremitus left side.

"*Percussion.*—Left side: forcible percussion shows tympanitic quality about third intercostal space; posteriorly there is dullness.

"*Auscultation.*—Left lung anteriorly shows marked amphoric respiration in subclavicular region, and gurgles heard at forced expiratory effort. His temperature was 102°; pulse, 100; respiration, 30.

"*Treatment.*—He was placed in the cabinet, and breathed against two tenths of an inch fall of the barometer for fifteen minutes, inhaling a one to one thousand mercuric bichloride solution; next day, three tenths of an inch pressure, and was gradually increased daily till eight tenths was reached, at which he continued throughout the course of treatment.

"*December 19th.*—Temperature, 102°; pulse, 100; respiration, 28.

"*23d.*—Temperature, 100°; pulse, 90; respiration, 26.

"*28th.*—Temperature normal; respiration, 24; pulse, 86.

"*January 20th.*—He feels 'as well as he ever did in his life.'

"He now weighs one hundred and twenty-five pounds—a gain of eight pounds in thirty-five days.

"*February 15th.*—Continued improvement, but still has a 'slight cough.'

"Physical examination now discloses absence of moisture in the cavity. Posterior dullness cleared up.

"*March 1st.*—Expresses a desire to resume his work as a laborer. Treatment now to be three times a week.

"*April 1st.*—Cough more troublesome, but feeling well.

"*12th.*—Left for southwestern Texas, to engage in work as a laborer.

"The case of acute phthisis reported as cured had the following history:

"Mr. J., aged thirty-four; best weight, one hundred and thirty-five; present weight, one hundred and fifteen. Mother died of consumption. Had cough about two months, accompanied by free expectoration and slight fever in afternoons, rapid emaciation, general weakness, etc. For several weeks had an evening temperature of 101°. He was first seen by me December 24, 1885. His general appearance was that of anæmia; slight depression of infra-clavicular region left side. Increased vocal fremitus, slight dullness, puerile respiration on right side, etc. Thirty applications were made, when his cough ceased, dullness cleared up. He is now (April 25, 1886) perfectly well, and has regained his normal weight."

Dr. A. S. Houghton, of Chicago, says:

"The report of cases treated by me in the pneumatic cabinet, as published in the 'Journal of the American Medical Association,' November 7, 1885, is amended to read as follows:

	No. of cases.	Recovery.	Improvement.	No improvement.	Deaths
Chronic bronchitis	9	5	1	3	
Asthmatic bronchitis	2	1	1		
Spasmodic asthma	2	1	1		
Acute phthisis, first stage	12	6	5	1	
" " second stage	4	......	1	1	2
" " third stage	6	1	1	1	3
Chronic phthisis	7	1	1	3	2
Unresolved pneumonia	1	......	1		
Total	43	15	12	9	7

"Of the nine patients unimproved, seven took less than three treatments. The three reported as recovered last November are in perfect health to-day. No. 3, about whom there was some dispute, called on me January 4th, reporting herself as having been free from cough since September; able to sing every day, as required by her profession, and weighing 146 pounds, a gain of twenty-one pounds since I first saw her. She wrote me April 18th as follows: 'I am still enjoying good health; weigh 140.' That is what I understand by the term recovery. The two other patients are discharged and are in good health, one gaining seventeen and the other eleven pounds. Of the five improved, three are in California.

"A. S. Houghton."

Professor James T. Whittaker, of Cincinnati, in closing the discussion upon the paper recently read by me before the American Medical Association, informally reported on cases treated by him with this process. He had found its effects pronounced and satisfactory. He spoke of patients with tuberculosis who had recovered. He declared that patients incapable of recovery became fascinated with the treatment, and it was necessary in many instances to restrain their demands for its administration when unwarranted, except by their desire. He declared himself an enthusiastic adherent of the pneumatic differential process, which he considered of inestimable value.

Dr. Whittaker is reported as having said, in a discussion before the Kentucky State Medical Society, that pneumatic differentiation had, he thought, entirely changed the prognosis of tuberculosis.*

Recognizing first the importance of systematic microscopical examination of phthisical sputum, secondly the wide numerical variation of bacilli on two slides of the same material, and third the difficulty of expressing their numerical value for comparison, Mr. Ketchum, who has conducted these examinations, has adopted the following system:

A comparatively equal distribution of bacilli is accomplished by a thorough trituration of the sputum for ten minutes in a sterilized mortar. Each examination consists of the thorough survey of six slides, three of which have been stained by the Ehrlich method as a test, and three by a modification of the Rindfleisch method. Exact values, based on number of individuals to given areas after the blood-corpuscle method, are impracticable, owing to the time necessary, and the impossibility of getting all bacilli in a given field in the same optical plane; consequently a table of estimated values has been established as follows: One, is occasional; two, medium; three, numerous; four, large quantities; five, *en masse.* Specimens have been identified by numbers and not by name of donor, so that an unprejudiced estimate could be made.

These examinations have shown increase, decrease, or absence of bacilli coincident with progressive symptoms, improvement, or absolute quiescence. In Cases IV and VIII of my report the evidence is corroborative of an inherent antagonism between the *Bacterium termo* and the bacillus of tuberculosis. So far as they go, they substantiate the advanced reports of Professor Cantani, of the Turin biological laboratory.

I am sensible of the incomplete manner in which I am obliged to record interesting data in many of these cases. Taken in conjunction with my previous report, they will be seen to supply some deficiencies there existing. My original position with reference to the pneumatic differential process seems substantiated. Numerous possibilities will demand close attention and prove a fruitful source of study and application. Some of these I have pointed out in a paper which I had the honor to present recently to the American Medical Association in St. Louis.* Certain facts have been demonstrated. Let them stimulate us to further accomplishment.

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DIOPTRIC OR DIOPTRY?

By EDWARD G. LORING, M. D.

I have read with much pleasure Dr. Burnett's interesting and courteous reply in your Journal of August 14th to my remarks on the spelling of the unit of refraction in the metric system of lenses. Dr. Burnett argues for the use of the word "dioptry" instead of the form "dioptric" adopted by me, and his principal reason for so doing is contained in the following sentence: "As for substantives ending in the usual adjective termination *ic* there is no warrant for them in good usage."

We have, however, not far to go to find a host of substantives ending in *ic* which have not only this ending but no other. Not to go outside of our own profession, we have such familiar words as the singular noun narcotic, with the adjective narcotic; so, also, tonic, prophylactic, erotic, escharotic, styptic, epidemic, endemic, dyspeptic, epileptic, eclectic, hypnotic, and a multitude of others in every branch of every trade, art, or science. All these substantives have adjectives spelled in identically the same way as the noun itself. If this is not good usage, it is the only usage we have. I simply cited the singular noun "optic" because it seemed to me directly to the point, and because both it and dioptric are derived from the same base.

In regard to the formation of ophthalmoscopy from ophthalmoscop*ie*, it would appear to me that the cases are not precisely identical, as ophthalmoscopy, chemistry, physiology, and similar words, are not exactly common nouns, but rather abstract nouns, being the name of arts or sciences.

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* "Gaillard's Med. Jour.," Aug., 1885, p. 208.

* "Jour. of the Am. Med. Assoc.," Aug. 14, 1885.

We do indeed speak of a chemistry and a physiology, meaning a book which treats of these subjects, but we do not as yet speak of an ophthalmoscopy or a microscopy, although we may one of these days do even this. Dr. Knapp used the term "ophthalmoscopic optometry" to denote the art of measuring the refraction of an eye by means of the ophthalmoscope, and if the term "dioptry" was applied to what pertains to the metric system of lenses, I could understand it; but it appears, to me at least, unnatural to speak of a "dioptry."

Dr. Burnett further says that he changed from the use of "dioptric" to "dioptry" after he had consulted with several scholars and ophthalmologists in this country. This is precisely what is needed, and if Dr. Burnett will only cite the names of such scholars as say that "dioptric" is not a scholarly word, or, better still, that it is not as scholarly as "dioptry," the matter will be settled at once. What is needed is some competent authority to determine which is the proper ending for the word and then to have it universally adopted. It was precisely because I thought "dioptric" more scholarly than "dioptry," and more in keeping with the usual formation of such words, that I used it. So far, I have seen nothing to make me change my mind in regard to it, but I am open to conviction.

In objecting to the form "dioptre" now so commonly used, Dr. Burnett says "no proper English word (at least according to our American standards) ends in *re*," and he backs up this opinion by a courage and patriotism almost sublime by spelling in some of his former writings the word metre, met*er*. It would seem to me, however, that the words theatre, sceptre, metre, fibre, mitre, centre, nitre, acre, and many others in every-day use, are very proper English words and properly spelled. With such examples before us it would seem as if there could be no objection to the form "dioptre" if one chose to adopt it.

I frankly confess that I do not understand what Dr. Burnett means when he says, "A metre-lens is one having a focus of one metre, and this is entirely independent of its radius of curvature and index of refraction." I can not imagine any system of lenses, metric or other, independent of a radius of curvature or index of refraction. It is all the less intelligible to me as Dr. Burnett in his former paper had a good deal to say about the radius of curvature and index of refraction in a "metre-lens," if there be such a word in the English language. The very existence of a lens depends on these factors, whether from an oculist's or optician's point of view, and, far from having "nothing to do with the case," they would seem to me to have everything to do with it. A manufacturing optician must either calculate—which he is utterly incapable of doing, as a rule—the index of refraction of every bit of glass that he uses and grind an expensive tool to fit it, or he must, as he always does, grind a tool of a certain fixed radius, and use it for all specimens of glass; and there will always be the same variations in focus in each system, metric or inch, due to differences in indices of refraction and inexactness and wearing away of the tools.

The question is not at all, as Dr. Burnett seems to suppose, how many English inches go to make one French metre, but how many equivalents of the *old system* it takes to make an equivalent of the new. As the old system is expressed by the number of inches in the radius of curvature, the problem reduces itself into determining how many inches of radius of curvature it takes to make a lens that has a focus of one metre, or 1 D. This depends on the index of refraction of the glass and the kind of inch used. If we use the French inch and an index of refraction of 1·5, as I did, and as Landolt did both in the paper and the book translated by Dr. Burnett himself, it will take a radius of 37 inches, and 1 D. will equal $\frac{1}{37}$. But if we assume, as Dr. Burnett now does, that "the index of refraction of glass generally used in manufacturing lenses is 1·53 instead of 1·5″, it will then take a radius, not of 40 English inches in round numbers, but of 42, and 1 D. = $\frac{1}{42}$—not an easy denominator to divide.

Dr. Burnett says, however, that it is still unaccountable to him why Landolt and I took $\frac{1}{37} = 1$ D. It may well be that I have not stated the matter as clearly as it is capable of being stated, and I will therefore restate it. It was because a biconvex or biconcave lens, with a radius of curvature of 37 French inches and an index of refraction of 1·5, produces a focus at a distance of one metre, is, in fact, what Nagel, and Dr. Burnett after him, calls a metre-lens, with a focus of 37 French inches, 39·5 English inches, and x Peruvian inches. Should this not be clear, I would refer him to the following: "In order to pass from the old system to the new, we have only to remember that 1 metre = 37 inches (Paris). The dioptric, D., corresponds, therefore, to a lens of 37 inches focal distance, and D. of the new system is equal to $\frac{1}{37}$ of the old."[*] "It is in this way that we can transpose the lenses with the old numbers to the new series when the index of refraction of the glass is 1·5, or when the radius of curvature and the focal distance are the same."[†] These seem to me perfectly clear statements, and the only wonder is that they do not to Dr. Burnett himself, whose language it is, or rather whose translation it is, since Dr. Burnett wishes it to be understood that he is in no way responsible for Landolt's mathematical and optical statements. For my own part, I desire no higher authority.

Now, as to the French inch, Dr. Burnett says that if French inches were meant it should have been so stated. I think it was so stated clearly enough for the average reader. Under the heading "Determination of Refraction according to the Standard of the Inch," the following statement is made:[‡] "The French inch has been adopted as the standard, as it is used in general ophthalmology when the old system is employed"; and in the very paragraph from which Dr. Burnett quotes it is stated that "in the new system the French metre, instead of the French inch, is used," showing that in the old system the French inch was used. Donders[#] says in regard to the French inch: "It is convenient to represent the value of A in Parisian inches, especially as the focal distance of lenses is usually stated in the same, and this applies more particularly to spectacles"; and this immortal work was written in English for Englishmen. The French inch, when the old system has been used, has always been and still is the standard inch. It has been used as such by all the continental writers from Helmholtz and Donders down with hardly an exception, and I do not know an oculist or practicing physician in this country who uses a test case the glasses of which are ground to the English inch. In this connection it would be interesting, not only to me but to many others, to know who the "manufacturing opticians" mentioned by Dr. Burnett are who furnish glasses ground to the English inch on oculists' and physicians' orders. As to a student "not knowing what a French inch is when he sees it," I have only to say that everybody knows what an inch is, and that a student can not open any book on physiological optics without meeting with the French inch on almost every page; and I agree again with Donders when, in speaking of French, English, and Prussian inches, he says in his broad and lucid way that "in practice a reduction will rarely be necessary."

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[*] "Ophthalmic Hospital Reports," viii, 3, p. 635.

[†] "Examination of the Eyes." E. Landolt. Translated by S. M. Burnett. P. 86.

[‡] "Text-book of Ophthalmoscopy," p. 122.

[#] "Accommodation and Refraction of the Eye," p. 30.

What a beginner in optics needs, so far as the ophthalmoscope is concerned, is a clear and succinct account of the great principles involved in its construction and use, and one that shall be free from the useless technicalities which have rendered, and are still rendering, the instrument a bugbear to him. The one great principle which more than any other will serve to prevent this is, it appears to me, the assumption, which is near enough for all practical purposes, that the focal length of a biconvex or biconcave glass is equal to the radius of curvature upon which it is ground. Any deviation from this may plunge the student into such a labyrinth of difficulties as to discourage him at the very start, and cause him to give up entirely the use of an instrument which may be of the greatest interest to himself and of the greatest value to his patient.

As for the optical part of this discussion, I must now leave it, as I have nothing further to say, or what would only be a reiteration of what has been already said. But I should be much pleased to see the proper mode of spelling the word determined, which so many think is destined to become the corner-stone of physiological optics.

CONTAGIOUS EYE-DISEASE.*

By JOSEPH A. ANDREWS, M. D.,

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The diseases of the eye which must be considered contagious are the blennorrhoic and diphtheritic. Von Graefe maintained that every abnormal discharge from the eye was contagious; and, within certain limitations, this is certainly true. The important question to decide is what is simple catarrh, for there are unquestionably cases of apparently simple catarrh of the eyelids in one individual, the discharge from which is capable of setting up an inflammation in the eye of another person when brought in contact with it. But, inasmuch as this simple catarrh does not, as a rule, endanger the sight of the individual, I shall not here ask to engage your attention with it, although I feel sure that, if it were generally believed that every abnormal discharge from the eye was contagious, it would establish a vigilance among patients, especially among that class on whom the great burden of blindness from these generally preventable causes falls, and bring them to the care of medical aid often in the very incipiency of their eye disorder; for such people, ignorant of the terrible consequences of not attending at once to these troubles, delay in applying for medical advice in these matters until the disease has made such terrible havoc with those parts of the eye, the integrity of which is indispensable to sight, that, when they do apply for treatment, their case is often helpless so far as restoration of sight is concerned. Too much can not be said in behalf of the need of making these facts known to every layman.

Blennorrhœa of the conjunctiva declares itself either in an acute or chronic form. Gonorrhœal and purulent conjunctivitis of the new-born have been classed under the head of acute conjunctival blennorrhœa. I have given many facts, in a recent communication, on the subject of the present paper, to show that these conditions are most probably identical.

The so-called granular conjunctivitis and papillary conjunctivitis are regarded as chronic conjunctival blennorrhœa. In a paper* which I had the privilege of reading before this society two years ago, I presented at some length the results of my histological studies of a number of cases of granular conjunctivitis examined at different periods of the disease, and by which I aimed to show that the great confusion which prevailed among investigators of this question as to the true nature of granular conjunctivitis was due to the fact that different observers had had different stages of the disease before them, and so some spoke of a *follicular form*, others of a *granular form*, and still others of a *papillary form*, while, in fact, these are different varieties of the same disease. I shall not again ask you to follow me through the tedious analysis of this question. I will only briefly refer to certain facts—*i. e.*, that, under the general name, trachoma, certain processes are embraced which authors agree depend on a chronic inflammation of the conjunctiva palpebrarum, combined with hypertrophic conditions, and this process may spread not alone over the entire conjunctival tissue, but pass to the deep structures of the lids and even spread to the cornea.

The so-called granular form is characterized by the presence of sago-like bodies, sharply defined—often, as the disease advances, coalescing—seated in a chronically inflamed conjunctiva. For this reason the disease is called granular conjunctivitis. It is also known as trachoma, *ophthalmie égyptienne*, *ophthalmie militaire*, and follicular conjunctivitis. These granulations are regarded by some as follicles, by others as true granulations. Granulations and follicles are, therefore, synonyms. These granulations may occur with an acute process—*acute granular conjunctivitis.* But it is very important to know that these granulations are also found for a long time unaccompanied with inflammation, or there is only slight injection of the conjunctiva. In such cases the disease is not suspected by a casual look at the eyes, it being manifest only when the lids are everted.

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* Read before the New York County Medical Society, February 15, 1886.

* "Archives of Medicine," January, 1884.

This granular conjunctivitis is generally accompanied with the so-called papillary form of the disease, which shows itself principally in the upper conjunctival *cul-de-sac*, as papillary excrescences dependent on proliferations of the papillæ of the conjunctiva. But this should not, I believe, be regarded as a special form of the disease, for in most of the cases of granular conjunctivitis this papillary form is present. Both forms are contagious, and one is no more so than the other.

Horner* believes that the essential points of difference between the granular and papillary forms is that the granular form is due to miasmatic infection (bad air), the papillary form being due to contagious infection through secretion from a diseased eye. But one or both forms may certainly result from contact with the secretion of one or the other form of the disease. Both forms, then, I believe, are contagious, and both forms lead to the same cicatricial changes in the conjunctiva. Goldzieher † speaks of an epidemic in the Blind Asylum in Budapest which had been lighted up by a newly admitted boy who had lost his eyes by acute conjunctival blennorrhœa (gonorrhœal conjunctivitis). From this case several male, and the majority of the female, pupils were infected. All imaginable forms occurred, from pure blennorrhœa to pure granular trachoma, with all the intermediate stages. And von Arlt often observed that the one form gave rise to the other form in another individual, the correctness of which statement I can fully corroborate.

Von Arlt, who was the first to give a comprehensive description of the true granulations, formerly insisted on the separation of the two forms; now he considers them as the same disease. The prophylaxis is certainly the same in the two forms, and we should regard them as one and the same disease. We have seen that granular conjunctivitis may result from infection with the secretion from an eye with purulent conjunctivitis, and that the reverse may be the case; however, as a general thing, when an eye is infected with the secretion from acute blennorrhœa, it acquires the same disease. If the disease be trachoma, trachoma is the result of the infection. The more active the catarrhal process in granular conjunctivitis, and the fresher the secretion, the more active will be the contagium. The secretion has been observed to retain its power for about thirty-six hours when dried on linen (Peringer).

Sattler stated at the Ophthalmological Congress at Heidelberg, in 1881 and 1882, that there was in trachoma a micrococcus peculiar to the disease, which occurs in the secretion (of trachoma and blennorrhœa of new-born) as well as in the trachoma again, and in the tissue. The spores were described as being circular, united in threes or fours. Sattler professes to have succeeded in reproducing this disease by inoculation of a human eye with a culture of the coccus in question. I have been greatly interested in this matter, but I have not been able to confirm Sattler's view. Every form of coccus, as far as is demonstrable with our present means, was certainly absent from the large number of trachoma cases which I examined two years ago with this end in view; and the investigations which I have made more recently convince me that cocci are present in the conjunctival tissue only when the disease in question is accompanied by an active catarrhal process. Nor could Da Gama Pinto* demonstrate these micro-organisms in the tissue of trachoma, and Krause† failed in his attempts to cultivate them. But there can not be any doubt about the contagious nature of this disease, and the secretion is the carrier of the contagium; and, the closer the secretion approaches a purulent character, the more active will it be, and the quicker will it show its effects when brought in contact with healthy eyes. The way in which the disease is spread is through the secretion on the fingers, towels, etc. The possibility of the infection taking place through the air can not be denied; but this mode of transfer must be rare, for even where large numbers of people occupy the same room, as in barracks, schools, protectories, etc., many of whom have the disease in question, it is most probable that the transfer takes place indirectly through actual contact of person, or through towels, wash-water, etc.

Cohn ‡ examined 111 children resident in an institution for deaf-mutes in Breslau, of whom 84 had trachoma; among the externes, on the other hand, there was not a single case of the disease. These figures are not large, but they show, by comparison, that the principal danger is not from children with trachoma being simply in the same room with healthy children, but, when they come to use the same towel and other washing utensils, the conditions are changed, and the spread of the disease is easy and rapid.

You know that for a long time the opinion prevailed that trachoma was first introduced into Europe by the soldiers of Napoleon I, who had acquired the disease in Egypt, hence the name ophthalmia ægyptiaca. However, there is good reason to believe that trachoma was known in Europe at a very early period in its history. But the terrible inroads trachoma made among the Napoleonic troops attracted general attention to it, and our more exact knowledge of trachoma certainly dates from the time of Napoleon I. We are told that 32,000 of Napoleon's soldiers were seized with trachoma; the English troops then in Egypt were also attacked with it; and in the succeeding twenty years the disease spread among nearly all European armies, and became epidemic (Larrey). The records of this epidemic are very extensive and extremely instructive. A few data deduced from these records will show the ravages the disease is capable of making: In the English army, in 1818, there were 5,000 invalids blind from this disease. In the Prussian army, 1813–1817, from 20,000 to 25,000 men were attacked with this disease, of whom 150 became totally blind, and 250 blind in one eye. In the Russian army, between 1816 and 1839, 76,811 men took the disease, of whom 654 became totally blind, and 878 blind in one eye only. In Italy, of 1,500 men with the disease, 97 lost one eye and 49 lost both eyes.

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* Fr. Horner, "Die Krankheiten des Auges im Kindesalter." Gerhardt's "Handbuch der Kinderkrankheiten," 1882, v, 2, p. 313.

† "Heidelberger ophthal. Congress," 1881, p. 37.

* "Centralblatt f. Augenheilkunde," 1884. † Ibid., 1882.

‡ "Hygiene des Auges in den Schulen," p. 170, 1867.

In the Belgian army, in 1840, every fifth man had trachoma, and 4,000 men lost the sight of both eyes, and 10,000 men lost the sight of one eye (Jüngken). In 1848 the disease reached Denmark, where, in Copenhagen alone, of 6,171 men, 1,156 took the disease (Fuchs). In recent years this disease has not appeared in epidemic form in the armies of Europe, but it still exists among the soldiers, numbers of whom leave the army with the disease uncured, emigrate to America, and thus become the means of spreading the disease in civil life. The statistics of Reich[*] are interesting in this connection. Among 40,000 soldiers (Caucasian army), 2,909 had granular ophthalmia, therefore 7·2 per cent.; and of 3,401 recruits, 3 per cent. had the disease, the inference being that the other 4·2 per cent. were infected in the army (Fuchs). In the navy the disease is no less terrible in its consequences. From the statistics of the sanitary records of the imperial navy we learn that in the Austrian navy, in 1875, almost every sixth man had trachoma. At St. Hubert, in Belgium, where trachoma is said to have been unknown before, it broke out in a severe epidemic in 1874, after soldiers with the disease had been quartered there, so that during the following year the disease had spread to such an extent that there were hardly any healthy eyelids to be found among the inhabitants, except among the children and aged (Dastot[†]).

But I do not marshal these figures before you because I believe that our army and navy are at present menaced with this terrible disorder; I think that they are pretty safe, especially on the score of numerical advantages, in this respect. For, our army being small, and the provisions for the soldiers' comfort being ample, they are in far less danger from the disease than are the large armies of Europe. I only adduce these figures to show to what extent the collecting together of large numbers of human beings under unfavorable hygienic surroundings contributes to the production and propagation of trachoma, and to give you some notion of the mischief it is capable of doing to sight. I am compelled to use the figures in the records furnished by our European colleagues, because in our country the disease in question has never existed as an extensive epidemic, nor has it received quite the attention which it deserves. The statistics, therefore, are wanting. But, if our army and navy are not threatened with this disease, we still are most alarmingly threatened with it in civil life, for a more humane civilization is multiplying new agents for spreading this and kindred contagious diseases — institutions where large numbers of human beings live together—*i. e.*, nurseries, asylums for children, almshouses, schools, prisons, workhouses, etc. The gentlemen of the committee appointed by the New York Academy of Medicine last year, in co-operation with the Board of Health, are engaged, with other experts, in personally inspecting our asylums and residential schools, etc., for the purpose of determining the extent of contagious eye diseases in these places. Last week the chairman of this committee, Dr. Derby, published in the New York "Medical Record" a preliminary report of the committee in question, which shows very plainly the necessity for taking radical steps to introduce a system in the management of these institutions which will go far toward preventing contagious eye disease from ever making any alarming inroads in our public institutions. This system is embodied in a bill which is now before the Legislature, and its recommendation by that body is a matter of the very greatest importance to our State.[*] I will not ask you to listen to a recital of the figures contained in Dr. Derby's preliminary report. They show, in the most convincing manner possible, that the eyes of the children in our public institutions are in a most deplorable condition. They show that, in spite of the honest zeal of our protectory societies, a great reformation is needed in the management of the hygiene of the asylums and residential schools of New York city and vicinity, where large numbers of children are constantly losing their sight because of the ignorance which prevails as to the methods for preventing the spread of contagious eye disease, and that, in their benevolence, while they are furnishing homes for homeless and helpless children, they have overlooked the fact that these homes are, in point of personal and domestic hygiene, far from what they should be, and that, in many instances, while they provide a home for these little creatures, they take in exchange the sight of the recipient by means which very simple methods might have removed. A tacit consent to carry out suggestions for the proper management and application of settled rules of preventive medicine in dealing with contagious disease is not enough. There must be a law making it obligatory for every board of management of incorporated institutions in which large numbers of children are received or cared for, especially on the congregate plan, to follow and enforce the rules framed for their guidance, and the bill framed by the committee of the New York Academy of Medicine is calculated to meet this urgent demand.

It has been found in Europe that trachoma is very common in boarding-schools. In English schools Bowman found that 59 per cent., Nettleship found 50 per cent. to 60 per cent. of the inmates had trachoma.

In the workhouses in Dublin, according to Kirkpatrick, during five years, 134,838 individuals were attacked with this disease.

Mackenzie speaks of an outbreak of trachoma on the slave-ship Rodem, which had 22 sailors and 160 slaves on board. Under way trachoma broke out among the people; only a single sailor escaped the disease. When the ship reached port, 39 negroes and 12 sailors had lost one eye.

Of 2,137 children examined by Dr. Mittendorf at the Catholic Protectory in this city, 871 children were found affected with this disease. In St. Patrick's Orphan Asylum, in this city, Dr. Agnew found 203 cases of communicable eye-disease (trachoma?) among 409 children. In St. Joseph's Asylum, in this city, Dr. Roosa found among 521 children 304 cases of communicable eye-disease. In the Hebrew Sheltering Guardian Society, in this city, I found 35 cases of communicable eye-disease (trachoma) among 52 children. In this institution the principal significant factor in the spread of the eye-disease is the use by children with healthy eyes of the same towel as has been used by other children with contagious eye-disease. All of which goes to show that crowding together of many persons, and principally the general use of the same washing utensils—as towels, sponges, etc.—are the most active agents in spreading this disease.

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[*] Nagel's "Jahresbericht," 1878, No. 267.

[†] "De l'ophthalmie granuleuse dans les écoles," Mons, 1878.

[*] This bill has become a law since the foregoing was written.

The great ravages of trachoma in the armies of Europe and in the prisons and other public institutions in Europe, to which allusion has been made, were due to the disease having made its appearance in an acute form, beginning as it did with great swelling of the lids, profuse purulent secretion, the cornea being involved. In these days the disease is seen most commonly in the chronic form.

Ophthalmia of the New-born.—There can be no doubt that this eye-affection belongs in the line of gonorrhœic disease. The important question now is, How does the gonorrhœic poison reach the eye of the child? Most obstetricians and ophthalmologists appear to be of the opinion that the blennorrhœa occurs during the birth of the child by an abnormal vaginal secretion of the mother being conveyed to the conjunctiva of the child. But post-partum infection appears to be more frequent than infection at birth; and even when the mother is affected the disease does not generally occur in the child unless the labor be a protracted one. For instance, among 304 children with blennorrhœa, Credé found that in 50 per cent. the expulsion of the head was protracted. Piringer and Haussmann furnish similar statements.

Theremin gives a very interesting table touching the question of the relative frequency of infection at birth and at a period subsequent to it: Among 476 cases of blennorrhœa—1st to 4th day, 57 cases; 4th to 8th day, 134 cases; 8th to 14th day, 94 cases; later, 191 cases.

The disease is unquestionably more frequently communicated after birth, through the agency of the fingers of the nurse or mother, or in the first wash after birth when any infectious discharge which may adhere to the infant's body is mixed with the water of the bath and in washing the face, introduced between the lids; although I appreciate that the blennorrhœic secretion undoubtedly does lose its virulence when diluted to a certain point. Then the child may be infected by the mother through her fingers or cloths, which may be soiled with the discharge from her genitals.

Prophylaxis.—In a recently published paper on the treatment of purulent conjunctivitis * in the new-born, I adduced a large number of facts which showed the value of the prophylactic measure introduced by Credé of instilling a two-per-cent. solution of nitrate of silver into the eyes of the new-born immediately after birth. It was shown that Credé had first tried thorough cleansing of the diseased vagina of the mother before the birth of the child. The number of cases of eye trouble was diminished thereby, but it did not disappear. When he began to disinfect the eyes of the infants the results were more favorable. This was quite natural, because, if the child was infected at the time of its birth, no amount of attention bestowed upon the mother would affect the child so long as it was neglected.

Previous to the introduction of the instillations of a two-per-cent. solution of nitrate of silver in Credé's clinic at Leipsic, 10 per cent. of the children born there had eye-trouble; since their employment, the disease is practically banished.

The procedure adopted by Credé was as follows: All eyes, without exception, were, immediately after birth, first washed with plain water and disinfected with a solution of nitrate of silver (2 per cent.), a single drop being placed in each eye; then the eyes were cooled with pledgets of linen wet in a solution of salicylic acid (2 per cent.). The vaginal douche was, on the contrary, discontinued.

I have had three opportunities of making a very thorough test of the value of silver as a prophylactic against gonorrhœal conjunctivitis. In these cases the gonorrhœic matter was known to have entered the eye, and the time of its entrance noted. In one case the matter remained in the eye for forty minutes, in another for one hour, in another for fifty minutes. A two-per-cent. solution of silver was instilled into the eye at the end of the time noted in the cases mentioned; not a single drop, but several drops, were placed in the eye and pieces of linen wet in a saturated solution of boric acid were applied to the lids for sixteen consecutive hours. The disease did not develop in any of these cases. Now, it may be asked whether these same instillations will be attended by good result after the disease is developed. I say, Yes; but they must be repeated often. I think that the chief merit of the single instillation immediately after the birth of the child consists in the fact that these instillations destroy the virulence of the secretion transferred before it has imparted its poisonous qualities to the secretion of the parts to which it has been conveyed, and I am confident that this is the great secret of our success with nitrate of silver, when it is used as a prophylactic, and in an early stage of gonorrhœal inflammation. I can not see any reason for making these instillations in the case of every child born in our public institutions unless the mother be the subject of an abnormal vaginal discharge; for I have satisfied myself that the normal lochial secretion does not contain infectious properties.

You know that it has been maintained that the normal lochial secretion was capable of setting up a conjunctival blennorrhœa. I do not believe this statement is in any way justified by facts.

You know that blindness from ophthalmia of the new-born occurs mainly among the ignorant poor. Ignorant of the dangerous character of a discharge of pus from an infant's eyes, these people often resort to some unsuitable domestic remedy, and delay seeking medical assistance until it is too late, even by the most skillful treatment, to save the child's sight. Our general dispensaries might aid very materially in disseminating intelligence touching the danger of neglecting to apply for medical advice when an infant has a discharge of pus from its eyes, by having conspicuously printed, on the card presented to every patient who applies for medical aid, the following *Instructions Regarding New-born Infants:*

"*If the child's eyes become red and matter begins to run from them, at any time after birth, take the child at once to*

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* "N. Y. Medical Journal," October 24 and 31, 1885.

a doctor. The disease is very dangerous, and, if not treated at once, it may destroy the sight of both eyes."

An effort was made a short time ago in England, in these same words, to spread this valuable intelligence through the "Poor Law Act," but it failed. Roth, in London, circulated tracts, through the *Society for the Prevention of Blindness*, which treated of blennorrhœa in infants. Brière, in Havre, caused a popular form of instructions for the care of ophthalmia in the new-born to be presented to every person who registered the birth of a child. In consequence of these and numerous other efforts, with the same end in view, some European governments have begun to give the subject serious attention.

In this great city, so rife with persons who make charitable work the especial object of their zeal, such persons could do a great deal toward introducing a wise and generous economy in our public charities and aid in spreading this important warning among the poor. But it is very evident that our practical philanthropists must first make themselves broader students of the matters which they undertake to regulate. They will then see that the reduction of expenses in our public charities, while of great importance in itself, should not be the sole object of their zeal; for that certainly is a false and ungenerous economy which reduces the expenses of our public institutions, and mainly thereby entails upon the recipients of its would-be benevolence sufferings and misery, which a special and expensive asylum (for the blind) must be provided to support.

When that law shall have been enacted which will make it a misdemeanor on the part of the managers of our schools and reformatories not to conform to the letter of a law which states in terms what cubic air-space must be secured for each inmate; what the dietary must be; especial weight being laid on the injunction that the inmates wash either in running water, or that every one have and use his own wash-basin and towel; that the eyes of every applicant for admission to these institutions be subjected to inspection by a competent medical man; and, if it is not consistent with the aims of the institution to receive trachomatous or other contagious eye-diseases, to reject them; but, if received, that such persons be separated from those inmates who have healthy eyes; and, furthermore, that at least monthly medical inspections be held—I fully realize the difficulties which may often attend the separation of trachomatous patients from those inmates of a school or reformatory, etc., who have healthy eyes. You know that in Mons, Belgium, there is a special infirmary for trachomatous children where they are housed, instructed, and receive medical treatment. I firmly believe that the establishment of such an institution in the vicinity of this city would be capable of accomplishing a great deal of good.

Those of us who have recently been engaged in inspecting the schools and asylums in this city have developed the fact that one out of every four of the inmates had contagious eye-diseases, and that the managers of said institutions were ignorant of the fact that there was a single case of such a disease among their charges. Of course, under such circumstances, the healthy and the diseased mingle together, and the evil consequences are self-evident.

But I do believe that we are capable of preventing the spread of this disease in large institutions which are under the surveillance of a competent medical man, provided we recognize all the cases of the disease in such an institution, and promptly place those cases with much secretion, or an active catarrhal process, in the hospital, and not allow them to mingle with the healthy children under any circumstances; those, on the other hand, in whom there is very slight or no secretion, being allowed to go to school and work together by day, but be separated at night; for trachomatous persons should *not* be allowed to sleep in the same room with persons who are healthy.

Then no trachomatous patient should be apprenticed out or released from our public institutions until the disease is cured, because such patients would endanger the other inmates of their homes.

Until such a law shall have been enacted, we shall struggle hopelessly against the spread of this terrible disease in our public institutions, many of which, because of the overcrowding, insufficient food, and general insanitation which prevails in them, are recognized active agents in recruiting the ranks of helpless human beings by impairing their usefulness and lowering their industrial capacity by permitting those preventable diseases to go on multiplying which to such an alarming extent lead to total blindness.

Treatment.—Practically, purulent diphtheritic croupous and trachomatous conjunctivitis are transmitted chiefly by inoculation.

I am convinced that almost all eyes may be saved from loss by purulent conjunctivitis by timely resort to the treatment which I shall point out. During the past three years there has been much discussion regarding the best methods to employ in the treatment of this disease. Some writers have maintained that they could, with cold and frequent washing of the eye, accomplish all that has been asserted for so-called antiseptics or germicides. Solutions of quinine, carbolic acid, boric acid, corrosive sublimate, nitrate of silver, and iodoform in powder, have received their share of praise by different observers, based on the supposed antiseptic or germicidal properties of the favored drug. The great mistake that some of these observers have made was in maintaining that with the employment of their favorite germicide they could dispense with the day and night nurse, and the scrupulous cleanliness which this implies. I believe that it can no longer be disputed that gonorrhœal conjunctivitis without the presence of a micro-organism peculiar to itself is not possible; and, further, that this particular coccus is the real exciting agent in the infection; for gonorrhœal inflammation has certainly been artificially produced in the human subject with a pure culture of the gonococcus. In view of these facts, and the indisputable evidence which clinical experience furnishes of the marked beneficial effect on gonorrhœic inflammation produced by the use of nitrate of silver, I am disposed to ascribe to this remedy qualities which are not possessed by another drug employed in the treatment of this disease.

You know that Oppenheimer, of Heidelberg, has published the results of some interesting experiments with bismuth, boric acid, carbolic acid, corrosive sublimate, and nitrate of silver, which show that corrosive sublimate and nitrate of silver are the two agents which are most speedily destructive to the gonococcus. These experiments I have verified in so far as the corrosive sublimate and silver are concerned. Now, we are perfectly aware that the actual cautery is sure death to all germs with which it is brought in contact; also that certain chemical agents are capable of doing the same, but only in such strength as to be, like the hot iron, destructive to the tissues. Oppenheimer found that a two-per-cent. solution of nitrate of silver was capable of arresting the development of the gonococcus. Oppenheimer's experiments consisted in cultivating the gonococcus in blood-serum. He found that of the mercurials, the bichloride was capable, in a weaker solution than the other salts of mercury, of affecting the growth of this germ. A solution of corrosive sublimate, 1 to 40,000, retarded development, and one of 1 to 20,000 destroyed the vitality of the gonococcus. My own experiments with silver and mercurial salts, with the same end in view, were made to determine how soon these agents were capable of destroying the infectious properties of gonorrhœic pus itself; that is to say, of destroying the gonococcus in the presence of its favorite medium, pus; and I found that a two-per-cent. solution of nitrate of silver was capable of doing this in from six to eight minutes. Another important virtue of the silver is that it gives rise to a superficial eschar, carrying off epithelial cells among which gonococci are entangled. But, Mr. President, the nitrate of silver is not sufficient. Cold applications to the lids and frequent washing are just as indispensable as heretofore. The use of nitrate of silver in this disease is not new. One of the most valuable papers ever published on the use of nitrate of silver in purulent conjunctivitis was written by von Graefe thirty years ago; and it has lost little of its value by the time which has passed over it. However, I believe that the silver (mitigated stick), as recommended by von Graefe in the treatment of purulent conjunctivitis, should no longer be used. I am convinced that the weaker solutions are efficient, and the only novelty in the use of nitrate of silver, as I employ it, is that the instillations are frequently repeated.

So long as the redness, heat, and swelling are on the increase, iced cloths should be applied to the lids, without interruption, day and night. Every fifteen minutes the lids should be gently separated and the secretion carefully washed out with bits of absorbent cotton dipped in a saturated solution of boric acid. I fully appreciate the value of an abundance of water in making all contagia more or less inactive. But the difficulty in the case of the eye has been to employ irrigation with effectiveness. I have devised for this purpose an eyelid retractor,* the arms of which are hollow, with a number of perforations in the claw for the passage of the fluid, which is supplied by a fountain-syringe. The lids should be gently lifted from the eyeball by means of the retractor, and the spray of fluid allowed to play upon the upper *cul-de-sac* for a few minutes, the length of time to be regulated by the amount of the discharge.

I employ a two-per-cent. solution of nitrate of silver from the very beginning of the disease, for I am convinced that it is capable of doing the most good in the early stage of the disease. By *dropping* the solution into the eye, the movements of the lids distribute it better than would be the case when the solution was brushed over the conjunctiva. The frequency of the application should be regulated by the character of the conjunctiva; the more vascular and succulent the conjunctiva, the more frequently should the two-per-cent. solution of silver be employed. When the vascularity and succulence of the conjunctiva are very pronounced, a twelve-per-cent. solution may be brushed over the conjunctiva of the everted lids. If the conjunctiva of the globe is only slightly affected, this stronger solution had better be washed off before the lids are replaced; if, however, this part is much involved, the lids may be replaced and the eye washed out, after about one minute, with cold water, and the cold compress be applied at once. As soon as the swelling decreases, the cold applications may be limited to two hours morning, noon, and evening. This treatment is certainly very simple, but it implies great and incessant care, and two skilled and trusty nurses—one for the day, the other for the night—who shall be in constant attendance. I know how terrible the results sometimes are in gonorrhœic ophthalmia in children and adults, but in my experience these frequent instillations of silver, together with the other vigorous and persistent important adjuncts just detailed, save the majority of cases.

I will not ask you to listen to the histories of sixteen cases of gonorrhœic conjunctivitis which I have recently treated by the employment of repeated instillations of a two-per-cent. solution of nitrate of silver. I will only say that the eye was not seriously damaged in a single instance. A striking illustration of the value of these frequently repeated instillations of silver was a case of gonorrhœic conjunctivitis which occurred recently in my service at Charity Hospital. The patient had but one eye. A one-per-cent. solution of nitrate of silver had been used in frequent instillations for nearly two days, the disease growing worse under this treatment. The cornea was involved, and the chemosis intense, but the improvement was very striking in thirty-four hours after the instillations of a two-per-cent. solution of nitrate of silver had been begun, and the patient recovered without damage to his sight.

Mr. President, there is certainly no question in ophthalmology so important as the treatment of purulent conjunctivitis, and, if I have taxed your patience and trespassed on your indulgence, I can only plead in extenuation my desire to record some personal experience with a familiar disease and an equally familiar remedial agent.

40 West Twenty-fourth Street, New York.

A Novel Way of reassuring a Patient was lately resorted to by a dentist in Mexico. A patient was to have a tooth extracted, but the preparations so frightened him that he declined to submit to the operation. To allay his fears, the dentist made his office boy open his mouth, and in a twinkling took out one of his teeth. We are not surprised to learn that the little fellow threw up his situation at once.

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* See this Journal, October 31, 1885, p. 483.

Correspondence.

LETTER FROM LONDON.

The Vacation.—Death of Dr. Wakley, Editor of the "Lancet."—An Unequal Struggle.—Sketch of Mr. Ernest Hart.

London, *September 7, 1886.*

From the day on which the British Medical Association closes its annual Congress until the 1st of October, when the medical schools reopen their doors, there is always a lull here in medical activity. The societies are in vacation, the hospitals are half empty, the great physicians and surgeons are away in Switzerland, in Scotland, and elsewhere enjoying their well-earned rest, and only a few young consultants are left in town to take charge of the thinly-peopled wards and to pick up stray guineas from passing patients. The West End is like a wilderness, the blinds are down in all the windows, and the streets deserted, except for here and there an expectant lady taking her slow and weary constitutional beside her devoted spouse. Parliament is still sitting, but Parliament's wife and children are at German baths, or English watering-places and country-seats, making the best of the short English summer. So there is little for me to record, and there would have been nothing, but that death, who is no respecter of the seasons or of holidays, has just taken away from us one who, from his position, if not from his personality, was a man of some note in the medical world of London. I allude to Dr. James Wakley, the editor and part proprietor of the "Lancet," whose decease, long expected, from cancer of the tongue, occurred on August 30th. Dr. Wakley was one of those of whom, even when living, little but good can be said. He had not the character, or the energy and ability, of his father, Thomas Wakley, the founder of the "Lancet," who, as journalist, politician, and coroner, was a commanding figure some thirty years ago. He succeeded by inheritance to a paying property and an influential position as a journalist, and the most that can be said of him is that he did his work conscientiously and honorably, without startling the world as his father had done, but at the same time without leaving behind him any of the soreness and heart-burnings which the "Lancet" in its unlicensed youth not infrequently evoked. James Wakley was not a profound man of science; his tastes were rather those of a country gentleman, and all the time that he could spare from his editorial desk was spent in the country with his horses and his dogs, and in distributing bounty to his poorer neighbors. He hardly ever went into society, and seldom spoke with the men who are making medical history. His sympathies were rather with the rank and file of the profession, and he made it the policy of his journal to represent their views and to favor their predilections. In his hands the "Lancet" has become the "Times" of the profession, the deliberate exponent of average thought and feeling. Up to his lights, Dr. Wakley did his editorial work most conscientiously.

In some respects the late Dr. Wakley had an uphill and not altogether successful struggle to fight. When he practically took over the editorship in 1859, the "Lancet" held the field without a rival. He dies leaving his journal overshadowed by the increasing bulk and popularity of the "British Medical Journal." For the last twenty years of his journalistic career Dr. Wakley, who was only a born editor in the sense that he inherited an editor's chair, had to contend with the brilliant ability, the untiring push, and the inexhaustible fertility of resource of Mr. Ernest Hart, who *is* a born journalist if ever there was one. Except that the former had an assured position to start from, the contest between the two men was a painfully unequal one. Wakley was almost a recluse, and seldom spoke to any one except his own subordinates. Erne Hart lives in the very thick of things, knows every one, and go everywhere. The editor of the "Lancet" was a man of mo erate intelligence, though of absolutely honest and transpare purpose, with a predilection for humdrum and commonplac and a penchant for small alms giving. The editor of the "Bri ish Medical Journal," whose brain, large as it is, seems hardl large enough for the schemes that bubble forth from it, is manager of men, a master of finesse, a diplomatist of the fir rank, a pungent writer, an eloquent speaker, a man of gran ideas, of wide knowledge, and of fine tastes. Under his tutelag the British Medical Association and its journal have advance by leaps and bounds, until they now provide us with probabl the most remarkable instance of co-operative journalism in th world. The control of a weekly journal which has 13,000 su scribers, and a yearly revenue of nearly £24,000, might seem sufficient tax even on a brain of exceptional proportions. Bu Mr. Hart has never been able to confine his mental activit within the four walls of an editor's office, or willing to give u to his profession what was meant for mankind. With marve ous foresight he has divined the wants of the great public yea ahead, and the public has not been ungrateful to him. In san tary commerce, it is whispered, Mr. Hart has had a large sha of the early bird's success. He foresaw, years ago, the sus picions that were destined to hover around the water-caraf and he forthwith introduced to us Apollinaris, "the queen table-waters." But, when it began to become evident to th far-sighted that suspicion was not unlikely to be transferre from the water-bottle to the milk-jug, Mr. Hart was largely i strumental in founding a monster milk-supply association—o of those which are gradually forcing the small retail dealer fro the field. He rightly saw that the public would soon deman some better guarantee of the purity of their milk-supply than th small farmer could give, and he conceived the idea of producin milk on a large scale and among irreproachable sanitary su roundings. The idea was not a very remarkable one, but M Hart was fortunate in being one of the first to seize hold of and turn it to practical use and profit. Other schemes of M Hart's have been more purely philanthropic. The Medica Sickness, Annuity, and Life Insurance Fund is still in its infanc but it has already more than fulfilled the dreams of its founde Then, in concert with his talented wife, who is an M. D. of Pari and a scientific investigator of acknowledged ability, Mr. Har has succeeded in bringing employment to the doors of hundred of Irish cabins, and music to the ears of thousands of our Eas End operatives. In more serious ways also Mr. Hart keeps a eye on the welfare of the public. As chairman of the Parlia mentary Bills Committee of the British Medical Association, h has a power of modifying bills in their passage through Parlia ment such as is enjoyed by few individual legislators. The ex perience gained in this work formed an admirable qualificatio for Mr. Hart in his candidature for a seat in the House of Com mons at last year's election, and very general regret was felt a his rejection.

Even from this inefficient catalogue of his exploits your read ers will readily understand that Mr. Ernest Hart is one of th most interesting personalities in the London medical world Looked at askance by some, esteemed and admired by many and feared more or less by all, Mr. Hart, in spite of great diffi culties, has won and kept a high position by his own unaide powers. His house is one of the few most catholic of medica resorts. There one meets neither all of one specialty, nor all o one hospital, nor all of one clique, but a well-mixed sample o all; for the little man with the leonine head has need of the all, and all are more or less sure, sooner or later, to stand i need of him.

THE
NEW YORK MEDICAL JOURNAL,
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NEW YORK, SATURDAY, SEPTEMBER 25, 1886.

A NEW THEORY OF THE ÆTIOLOGY OF TETANUS.

The veteran French surgeon, M. Verneuil, beings forward, in a recent issue of the "Gazette hebdomadaîre de médecine et de chirurgie," a remarkable hypothesis concerning the origin of tetanus in man, namely, that the disease is transmitted from the horse. M. Verneuil states that until lately he had not seriously entertained the theory of the infectiousness of tetanus, notwithstanding its support by such eminent surgeons as Lister, Billroth, Rose, and others, but that he is now disposed to admit it, owing very largely to the facts and arguments that have been arrayed in the journal that publishes his present communication.

The notion of the equine origin of tetanus first occurred to him from reflecting on a fact mentioned by M. Larger in a communication to the *Société de chirurgie* at its meeting of October 28, 1885. The statement was that, within the memory of man, there had never been a case of tetanus in the human subject observed in the little community of Achères, but that tetanus in horses was not very uncommon there, four cases having been observed during the preceding few years, and that, of those four cases, two had developed on the property of a Mr. P. This gentleman's stable was separated from his house only by a court, and in this court Mrs. P. fell down one day, and wounded her elbow, which was bare at the time. She was subsequently seized with well-marked tetanus, but recovered. Such being the facts, is it allowable, asks M. Verneuil, to infer that Mrs. P. took tetanus from her horses? As for negative arguments, there is no lack of them, he remarks. The last horse was attacked with tetanus in 1881, and it was not until 1885 [1884] that Mrs. P. hurt her elbow. The injury took place on the 5th of October. Healing occurred promptly enough, and the tetanus did not show itself until the 15th of February, which fact is at first sight suggestive of spontaneous tetanus. To accept, then, the equine origin of the disease in this instance, we must first admit that the tetanic virus of the last horse was deposited in the court adjoining the stable, and that it maintained its power for four years, and then, having gained access to the lady's elbow, lay dormant for four months and a half, the wound healing in the mean time.

M. Verneuil confesses that the supposition involves improbabilities, but he proceeds to deal with them as follows: It is not surprising that the virus should have preserved its activity from 1881 to 1885 [? 1884], for it had once before preserved it from 1871, when Mr. P.'s first horse fell a victim to it, until 1881, when the second horse was destroyed by it. If the stable remained infected for ten years, it may well be that the soil of the court could retain the germs for five [? four] years, especially in the light of what Pasteur has taught us about the impregnation of earth with the virus of anthrax, and of Nicolaïer's curious experiments on the power of the soil of roads and fields to generate tetanus. As to the long period of incubation and the protracted latency of the virus in the wound of Mrs. P.'s elbow, they are no more remarkable than the unlimited incubations of the virus of rabies, which does not prevent the healing of wounds in which it has been deposited. To allow any serious weight to the objection, we should first be sure as to the normal duration of the latent period and as to the variations of the same in the chronic and the so-called spontaneous forms; and, as regards the latter, who can say that it is not the result of the implantation of an attenuated virus? While some may regard the tetanus of Mrs. P. and her horses as having nothing but a chance connection, others may think it strange that the only case of tetanus in the human subject that had been seen in a little village should have shown itself as the successor of cases in horses and on the very property where the disease had seemed to be in some sort endemic.

Putting these questions aside, M. Verneuil proceeds to certain facts that have come to his knowledge concerning the conditions under which tetanus shows itself. These he has gathered largely from communications sent to him by country practitioners. Some of them are very striking; but we have not space to recount them in this article. The important thing to look into in the future, he says, is the genesis of tetanus in sporadic cases and in such as mark the beginning of an epidemic. It is chiefly in the country, where the disease is infinitely more common than in large cities, especially Paris, that research may be undertaken with the greatest prospect of success. He cites certain data furnished to him by an army surgeon, by which it appears that, in 100,000 men in each branch of the service, the death from tetanus amounted to 0·85 in the infantry, 2·15 in the cavalry, and 1·05 in the artillery; the disease being, therefore, nearly three times as common in the cavalry as in the infantry. On the other hand, two naval surgeons have been unable to recall, in answer to his inquiries, a single case of the disease on shipboard.

He then alludes to Nicolaïer's curious experiments. Having made comparative trials of earth taken from gardens and forests on the one hand, and that taken from roads and fields on the other, that observer found that it was only with the latter that he could communicate a sort of tetanus to animals. It is well known that the surface of fields and roads is continually impregnated with the excreta of horses, while that of gardens and forests receives them only exceptionally.

In conclusion, he remarks that the kind of research to be undertaken in order to settle the question will be readily understood, as well as the theoretical and practical importance of solving it. It must be confessed that, the experimental method —which, for that matter, has not accomplished much in throwing light on the pathogeny of tetanus in general—not being called upon to decide whether equine tetanus is or is not transmissible to man, it remains for clinical observation to undertake the task.

MINOR PARAGRAPHS.

A SUIT TO RECOVER FOR SERVICES.

An action is now pending in which a New York physician seeks to recover a balance of between three and four hundred dollars alleged to be due him on a contract to treat a patient for a year, supplying the necessary apparatus, for the sum of seven hundred dollars. Half this amount was paid at the outset, but subsequently the patient's father dismissed the physician and refused to pay the balance. He was, of course, at perfect liberty to decline the doctor's further services at any time, but we fail to see on what ground he should be excused from carrying out the pecuniary part of the agreement. He maintains, to be sure, that the doctor's treatment of his daughter was injurious, but that is a stock answer in cases of the sort, and it is gratifying to learn that in this instance the court granted a motion that the answer should be made more definite.

THE NEW YORK STATE BOARD OF HEALTH.

The announcement that the president, Dr. E. M. Moore, of Rochester, has resigned from the board will cause regret in the mind of every member of the medical profession who knows Dr. Moore's sterling character. His withdrawal from the board materially weakens it as a body, and the inference may be drawn that the parsimonious policy pursued by the State government toward the board has been one of the reasons that have impelled Dr. Moore to the course he has taken. The wonder is that so busy a man as he should so long have consented to remain the head of an organization ostensibly responsible for the sanitation of the State, but practically shorn of the authority and resources necessary for any approach to the achievement of its objects.

THE CARE OF LUNATICS IN ASYLUMS.

We lately commended the steps taken at the Poughkeepsie asylum, by the establishment of a nurses' training school and in other ways, to improve the character of asylum nurses and attendants. We trust that the efforts of this and other like institutions will soon place among the impossibilities such an occurrence as recently took place in the Flatbush asylum in Brooklyn, in which, according to the finding of a coroner's jury, a patient was fatally scalded in a bath.

ITEMS, ETC.

Infectious Diseases in New York.—We are indebted to the Sanitary Bureau of the Fourth Division of the Health Department for the following statement of cases and deaths reported during the two weeks ending September 21, 1886:

DISEASES	Week ending Sept. 14.		Week ending Sept. 21.	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever...............	28	13	46	12
Scarlet fever............. ..	15	1	10	1
Cerebro-spinal meningitis ..	2	1	2	2
Measles.....................	20	5	32	4
Diphtheria..................	27	17	45	18

The Cholera in Foreign Countries.—Dr. Edward O. Shakespeare, who in October, 1885, went abroad as a United States Commissioner to investigate the cholera, arrived at his home in Philadelphia on Monday last. In his investigations of the disease he visited the places in France, Spain, and Italy in which the disease had been epidemic, and also went to Calcutta, in which place, however, there were no cases of cholera at the time of his visit. He is reported as having said that the people of India live in much greater squalor and filth than the pe antry of those portions of Europe that suffered so severely d ing the epidemic of 1885.

A Recovery from Hydrophobia.—In October of 188 physician now living in a neighboring city was bitten by a ra dog. The wound, which was on the right thigh, suppurat there was much constitutional disturbance, and, according his own statement, a distinct and severe hydrophobic conv sion. The marks of the animal's teeth are still plainly visil the affected thigh and its fellow are covered with reddi brown maculæ varying in size from that of a large pin-head that of a silver three-cent piece, and both thighs are exquisit sensitive.

Obstetrics in Vienna.—According to Professor Braun's s tistics, there have been during the past twenty-nine years at Vienna General Hospital 108,889 confinements, with a morta of 1,945, or an average of 17 to every thousand. The death-r has been reduced, by sanitary improvements and the introd tion of the antiseptic system, from 28 in every thousand in first six years to 7, and in 1883 even to 2 in every thousa cases.

The American Gynæcological Society.—At the busin meeting held Wednesday evening, September 22d, the follo ing gentlemen were elected officers for the ensuing year: I A. J. C. Skene, of Brooklyn, president; Dr. J. C. Reeve, Dayton, O., and Dr. Ellwood Wilson, of Philadelphia, vi presidents; Dr. J. Taber Johnson, of Washington, secretar Dr. M. D. Mann, of Buffalo, treasurer; Dr. W. H. Baker, Boston, Dr. T. M. Drysdale, of Philadelphia, Dr. C. C. Lee, New York, and Dr. A. Reeves Jackson, of Chicago, memb of the council. The proposition to co-operate in the moveme for the confederation of the various special societies was fav ably considered, and it was voted to hold the next meeting New York, September 15, 1887.

Recent Lyons Theses.—The “ Union médicale ” gives t following list of theses defended before the Lyons *Faculté médecine et de pharmacie* during the months of July and A gust: F. Perrenot: “ An Experimental and Clinical Study Camphor.” Jules Éraud: “ Injections in Gonorrhœa in t Male.” Jules Bosse: “ A Comparative Study of Beriberi a Scurvy, especially from the point of view of Exotic Patholog Louis Magnieu: “ A Physiological Contribution on Acetopl none.” Gèghre: “ A Study of Chandernagor; its Geograpl Topography, Climatology, Ethnography, Pathology, and Hy ene.” Eugène Le Pord: “ Notes on Paludal Fever at Sain Marie, Madagascar.” Émile Renault: “ On Punctate Caute zation, and on Hæmoptysis after its Use in Pulmonary Phthisis P. Marius: “ Albuminuria as a Sign of Bright's Disease.” A guste Pollosson: “ On Hydrotherapeutics, and especially Baths in Scarlet Fever.” L. Sarda: “ On Peripheral Neuri in True Tabetics.” Georges Gillateau: “ On the Chigoe [*pu chique*] and the Accidents it may occasion.” Joseph Assad “ Rickets and Osseous Syphilis; an Attempt at their Anatomic and Clinical Differentiation.” Henri Casimir: “ The Influen of Antipyrine on the Urinary Secretion.” G. Hébrard: “ C rhosis of the Liver in Children.” Joseph Allard: “ Tics in t Insane.” René Duzéa: “ Certain Developmental Affections the Skeleton due to Superficial Angeiomata.” Gustave Pare “ Sclerosis of the Columns of Goll.” Victor Rochet: “ Troph Affections after Resections for Disease.”

The Buffalo General Hospital, it is announced, is to r ceive a legacy of $10,000 by the will of the late Mr. Geor Howard.

The International Medical Congress.—Professor Virchow is reported to have said at the recent meeting of the Society of German Naturalists and Physicians that he fully expected that a large German delegation would attend the Washington Congress next year "if the committee of the American Medical Association succeeded in smoothing over the differences existing in that body."

Army Intelligence.—*Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from September 5, 1886, to September 18, 1886:*

Wakeman, William J., First Lieutenant and Assistant Surgeon. Granted leave of absence for one month, with permission to apply for three months' extension, to take effect when his services can be spared in the Department of the Platte. S. O. 207, A. G. O., September 6, 1886.

Wales, Philip G., First Lieutenant and Assistant Surgeon. Granted leave of absence for one month, with permission to apply for an extension to November 5, 1886. S. O. 70, Division of the Pacific, August 31, 1886.

Bannister, William B., First Lieutenant and Assistant Surgeon (recently appointed). To report by letter to the commanding general of the Department of Arizona for assignment to duty. S. O. 208, A. G. O., September 7, 1886.

Walker, F. V., First Lieutenant and Assistant Surgeon. Assigned to temporary duty at Fort Adams, Rhode Island. S. O. 131, Division of the Atlantic, September 8, 1886.

Wales, Philip G., First Lieutenant and Assistant Surgeon. Resignation accepted by the President, to take effect November 5, 1886. S. O. 212, A. G. O., September 11, 1886.

Naval Intelligence.—*Official List of Changes in the Medical Corps of the United States Navy for the week ending September 18, 1886.*

Simons, M. H., Passed Assistant Surgeon. Detached from the Alert, and placed on waiting orders.

Norfleet, E., Passed Assistant Surgeon. Detached from the Alert, and placed on waiting orders.

Bogert, E. S., Medical Inspector. Ordered to Navy Yard, New York, September 28, 1886.

Marine-Hospital Service.—*Official List of Changes of Stations and Duties of Medical Officers of the United States Marine-Hospital Service, for the two weeks ended September 18, 1886:*

Austin, H. W., Surgeon. Granted leave of absence for thirty days. September 16, 1886.

Goldsborough, C. B., Surgeon. Promoted and appointed Surgeon from October 1, 1886. September 9, 1886.

Yemans, H. W., Passed Assistant Surgeon. Granted leave of absence for ten days. September 16, 1886.

Bevan, A. D., Passed Assistant Surgeon. Promoted and appointed Passed Assistant Surgeon from September 1, 1886. September 7, 1886.

Granted leave of absence for thirty days. September 7, 1886.

Glennan, A. H., Passed Assistant Surgeon. Promoted and appointed Passed Assistant Surgeon from September 1, 1886. September 7, 1886.

Norman, Seaton, Assistant Surgeon. To proceed to Vineyard Haven, Mass., for temporary duty. September 9, 1886.

Society Meetings for the Coming Week:

Monday, *September 27th:* Medical Society of the County of New York; Boston Society for Medical Improvement; Lawrence, Mass., Medical Club (private); Cambridge, Mass., Society for Medical Improvement.

Tuesday, *September 28th:* New York Academy of Medicine (Section in Laryngology and Rhinology); New York Dermatological Society (private); Buffalo Obstetrical Society (private); Medical Society of the County of Lewis, N. Y. (quarterly); Boston Society of Medical Sciences (private).

Wednesday, *September 29th:* Auburn, N. Y., City Medical Association; Berkshire, Mass., District Medical Society (Pittsfield).

Thursday, *September 30th:* Cumberland, Me., County Medical Society (Portland); New London, Conn., County Medical Association (extra—New London).

Friday, *October 1st:* Practitioners' Society of New York (private).

Saturday, *October 2d:* Clinical Society of the New York Post-graduate Medical School and Hospital; Manhattan Medical and Surgical Society (private); Miller's River, Mass., Medical Society.

Letters to the Editor.

THE SOCIAL EVIL.

244 West Forty-second Street, *September 22, 1886.*

To the Editor of the New York Medical Journal:

Sir: Will you do me the favor to publish the following reply to Dr. F. C. Valentine? W. M. McLaury.

[Dr. McLaury to Dr. Valentine.]

Dear Doctor: I thank you for the letter in the "New York Medical Journal" for September 18th; the spirit inspiring it is good.

1. You take exception to the definition of lust as "love gone mad." You say that love is holy, lust unholy, and that they have no relation to each other. They are both sexual, and are therefore related. Love, lust, and hate are the three sexual passions, and supplemental to them comes jealousy, also as a sexual passion in which love and hate are blended. Your statement that love is divine, natural, rational, healthy, and holy is just as true as that lust is its reverse, being unnatural, irrational, unhealthy, unholy, and demoniacal—merely other words for "love gone mad."

2. We read in the Bible that Solomon *loved many women.* The natural law has not changed since his time. If he could love wives and concubines, then men may love a wife and also love mistresses now, as doubtless many do. But, as I say, I do not think that they develop the highest type of domestic bliss.

3. You ask what love has to do with prostitution. I will ask in reply, Can any man love two or more women? You must remember that for every fallen woman there is a fallen man; in other words, there are as many male as female prostitutes, and for whatever of immorality is engendered by it man is quite as responsible as woman, and many times—tenfold—more so, as she is his innocent victim.

4. The sexual appetite is all right; it is God's best gift, and only becomes an evil when perverted or abused. The *proper* use and cultivation of the appetite not only engender new beings, thus perpetuating the race, but produce health and strength of body and mind in the individual all through life. Prostitution is the perversion of a natural, healthy appetite.

5. On page 12 of "Social Ethics," I attempted to show that the ceremonial marriage law was not always *God's law.*

6. The sufferings girls endure from the nubile age to marriage rests not on the assertion of a *Miss*, although so graphically described by her. Every family practitioner annually meets with scores of cases of hysteria and chorea in girls. Although the young patients or the parents do not know the cause of their mysterious symptoms, the attending physician recognizes it as a disturbance or perversion of the procreative and sexual apparatus. It is not the girls who romp with boys and mingle in school and at home with children of the opposite sex

that are subject to hysteria, but the tender house-plant that is carefully guarded and is the subject of austere discipline. These girls are choreic and hysterical. A freer commingling of the sexes, both old and young persons, in a decent, orderly manner, would prevent and relieve many of the nervous disorders now so prevalent. The intermingling of the sexes need not be carried even so far as kissing to prevent the evils incident to sexual starvation—simply social intercourse, cheerful conversation, singing, and dancing.

7. As to placing the right of suffrage on an intellectual qualification, it would be as difficult to draw the line of qualification on the intellectual plane as it now is to determine who are sane and who are insane. I would so perfect the system of education as to render every one, male and female, qualified in that respect. As to woman becoming intellectual by the general diffusion of knowledge, she can be trusted. Even the churches are coming to the conclusion that she can be trusted.

8. I can not change the term "filthy political pool" until the pool is changed—cleansed.

9. We care not what the prostitutes of to-day think or say of the educational scheme. This generation has to suffer, but succeeding ones may be greatly benefited by the discussion of this subject.

10. Intelligent men and women high in church and State suffer because love is higher than civil or sacerdotal law, and their natures can not be controlled by either.

11. I am with you in the belief that none of God's creatures are lost.

12. Your first, second, and third propositions would be merely temporary palliatives of the evil. I would so educate people that they would live on a higher plane—enjoy more and suffer less. Thus all things that tend to degrade the human race will be outlived and left to die a natural death.

13. Some writers assert that the failure of the St. Louis law was due to the strict registration, and that some very influential people high in church and State were afraid of it on that account—hence the repeal.

14. If women become prostitutes from other motives than lust or love, what other motives incite the male prostitutes?

15. Teaching prostitutes how to reform and earn a decent living is a part of the educational plan, and we must look for its fruition more to the coming generations than to the present.

Again I thank you for having in your open letter so kindly and ably discussed this subject, and, with you, I now earnestly hope that good to humanity may grow out of the discussion. It is a broad subject, and will bear honest investigation. I hope I may hear from you again, either publicly or privately. I hail you as a co-laborer.

Fraternally yours,

William M. McLaury.

Proceedings of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Meeting of September 8, 1886.

The President, Dr. John A. Wyeth, in the Chair.

Atheroma of the Coronary Arteries and the Arteries at the Base of the Brain.—Dr. Waldstein presented specimens from a hospital patient, aged sixty-four years, who had had diabetes and albuminuria. There had been no symptoms which pointed toward disease of the heart, and the speaker was surprised to find at the autopsy marked calcification of the coronary arteries. There was also decided atheroma of the arteries at the base of the brain. The aortic valves were atheromatous. The patient was very fat. The pancreas was little else than a mass of fat. The liver was fatty and cirrhotic. The kidneys were large and of a pale grayish-yellow color.

Dermoid Cyst of the Ovary and Broad Ligament.—
E. Hodenpyl presented a specimen from the body of a wom
aged forty-five, who died of pneumonia. The uterus and
ovary were normal. The right Fallopian tube was elongat
and the left ovary was enlarged. Occupying nearly the wh
of its substance were three communicating cysts, filled wit
white, semi-solid material, composed of fat droplets, epithe
scales, and a considerable number of short fine hairs. The cy
wall was formed of dense connective tissue. In the substa
of the ovary were several very small masses of calcareous
terial. Within the folds of the broad ligament, and extendi
from its outer attachment as far as the uterus, there was a m
tilocular cyst which communicated with those in the ovary.
contained the same elements as the cysts of the ovary, but
contents were softer and darker in color, and the hair and e
thelial scales less numerous.

Dr. Prudden thought it a question of interest whether
two cysts were originally entirely separate.

Urethral Calculi.—The President presented two ureth
calculi removed from a patient on whom he had operated
1882 and 1883, removing calculi from the urethra. The m
passed three years in fair comfort, when he again returned w
symptoms of obstruction. A calculus was found five inches
yond the meatus, which was removed by cutting into the u
thra from below. The operation was done under the influe
of cocaine and was painless. Some calculi were also found wi
in the bladder. The operation was followed by a chill and fev
and death took place in ten days. An autopsy was not obtain
It was probable there was disease of the kidneys.

Book Notices.

The Extra Pharmacopœia, with the Additions introduced in
the British Pharmacopœia, 1885. By William Martinda
F. C. S., etc. Medical References and a Therapeutic Ind
of Diseases and Symptoms, by W. Wynn Westcott, M.
Lond., Deputy-Coroner for Central Middlesex. Fourth E
tion. London: H. K. Lewis, 1885. Pp. 416.

This little book will be found exceedingly useful, not on
as a supplement to the British Pharmacopœia, but from t
wide range of information to be found in it concerning unof
cial drugs and preparations. It seems to have been compil
with great care, and but few sources of trustworthy data ha
been neglected.

A Treatise on the Diseases of the Nervous System. By Willi
A. Hammond, M. D., Surgeon-General, U. S. Army (retir
list); Professor of Diseases of the Mind and Nervous Syste
in the New York Post-graduate Medical School and Hos
tal, etc. With One Hundred and Twelve Illustratio
Eighth Edition, with Corrections and Additions. Ne
York: D. Appleton & Co., 1886. Pp. 945. [Price, $5.]

Dr. Hammond's successful book has reached its eighth ed
tion in a comparatively short space of time, and in many
spects, like some other things, it has improved with time. T
present edition contains, in addition to certain changes in t
body of the volume, a section upon "Certain Obscure Disea
of the Nervous System," the most interesting of which is *Mir*
achit, a comparatively rare and dramatic affection which w
observed by the late Dr. Beard among the Maine "jumpers
and described by him. The articles upon metallic diseases a
not so complete as they might be, and little mention is made

arsenical paralysis, but these are minor faults. The work is fully up to date, and an attractive new feature is a special chapter upon the symptomatology of cerebral lesions, with careful original notes by the author. This is in advance of any recent work and much more complete than the introductory chapter upon the same subject in Vol. V of Pepper's treatise. While all may not agree with Dr. Hammond as to the possible refinement of diagnosis which he alleges, or in all his therapeutical ideas, his work must be regarded as one of scholarly solidity and value.

A Short Manual for Monthly Nurses. By Charles J. Cullingworth, M. D., Member of the Royal College of Physicians of London, etc. Philadelphia: P. Blakiston, Son, & Co., 1884. Pp. viii–79.

This small volume is written as a supplement to the author's well-known work on nursing. It treats only of the conditions of pregnancy and labor. It is clear in its statements, and will prove of great value to those whose duty it is to care for women during and after confinement.

The Elements of Physiological and Pathological Chemistry. A Hand-book for Medical Students and Practitioners, containing a general account of Nutrition, Foods, and Digestion, and the Chemistry of the Tissues, Organs, Secretions, and Excretions of the Body in Health and Disease, together with the Methods for preparing or separating their Chief Constituents, as also for their examination in detail, and an Outline Syllabus of a practical Course of Instruction for Students. By T. Cranstoun Charles, M. D., Fellow of the Chemical Society, Lecturer on Physiology, St. Thomas's Hospital, etc. Illustrated with thirty-eight engravings on wood and a chromo-lithograph. Philadelphia: Henry C. Lea's Son & Co., 1884. Pp. 463.

The reader must not be prejudiced against this book on account of its ponderous title. It is really a valuable work, and fills a place among English medical treatises which has long been vacant. Physiological chemistry has hitherto been dealt out piecemeal in works upon physiology; if the reader desired any more extended reference to a subject in which he was interested, or if he wished to obtain a connected view of the science, he was obliged to consult German authorities. Dr. Charles has accomplished his work with true German thoroughness, but has avoided many of those useless details which embarrass the student in his reading of foreign treatises.

The author divides his volume into four books, the first of which treats of foods, the second of digestion and the secretions concerned in it, the third of the chemistry of the tissues and organs, and the fourth—an exhaustive discussion—of the excreta, over a hundred pages being devoted to the urine. The whole is concluded with a compact syllabus, or guide to practical examinations.

We have no serious criticisms to offer upon the book, except that it is rather beyond the scope of the average medical student. But it contains a good deal of practical information which will be useful to the practitioner, even if he does not have time to follow out the laboratory work.

We note a few minor blemishes, the principal one being the unfortunate title. There is no objection to an author's putting in a long string of honorable distinctions after his name, but he makes a great mistake when he substitutes an index for a title-page. Why not call the book "Physiological and Pathological Chemistry," and let the reader judge of its contents for himself? The pathological part of the subject, by the way, is kept rather in the background. We miss any references to Dr. Squibb's ingenious apparatus for the quantitative estimation of urea. The illustrations are fair, but are fewer in number than is to be desired. Since no credit is given for them, the natural inference is that they are all original, though some look quite familiar. The appearance and arrangement of the book are above reproach.

Practical Human Anatomy. A Working Guide for Students of Medicine and a Ready Reference for Surgeons and Physicians. By Faneuil D. Weisse, M. D., Prosector (1863 to 1865) to the late Valentine Mott, M. D., LL. D., Emeritus Professor of Surgery and Surgical Anatomy, Medical Department of the University of the City of New York, etc. Illustrated by 222 Lettered Plates, containing 321 Figures. New York: William Wood & Co., 1886. Pp. xi–456.

It has been known for a number of years past that Dr. Weisse was engaged in the preparation of a work on anatomy to be freely illustrated by original drawings. The book is indeed so profusely illustrated that, although it does not contain five hundred pages of text, including the cuts that appear in the text, it is as thick as most volumes of twelve hundred pages. The illustrations, therefore, constitute the most notable feature of the book. They are exceedingly well drawn, and, by those who like a lithographic effect, they will be esteemed for their execution. They do not seem to be lithographs, however, but photo-engravings. For our part, we prefer the clearness of a wood cut; but the process work shown in the book leaves nothing to be desired from a practical point of view.

The text gives the impression of being in great measure a commentary on the illustrations. Attention is given by turns to descriptive passages and to paragraphs of working directions for the dissector, the latter being printed in small type. Dr. Weisse has produced a book which is certainly a solid addition to the student's resources, but it must be confessed that there is too little of it, always excepting the illustrations, to enable the student to dispense with other works on descriptive anatomy, and too much of it to be a convenient dissecting-room manual. We have noticed some errors of statement, but for the most part they are not of a nature to give serious trouble. Doubtless they will be corrected in a subsequent edition, and we trust that that will soon be called for. The appearance of the volume is very handsome. For the ordinary needs of the practitioner we think it quite adequate, and as a guide to surgical anatomy it may well take the place of some of the bulky and expensive atlases. Our impression is that it will be esteemed in this capacity rather than as a student's book.

Diagnosis of the Diseases of the Brain and of the Spinal Cord. By W. R. Gowers, M. D., F. R. C. P., etc. New York: William Wood & Co., 1885. Pp. viii–293. [Wood's Library of Standard Medical Authors.]

Dr. Gowers's "Diagnosis of Diseases of the Spinal Cord" is well known to the profession; no practitioner can have read that excellent work, however, without feeling that a similar work upon the brain would be in the highest degree desirable. This desire of the conscientious student of neurological medicine has at last been realized; and in "The Diagnosis of Diseases of the Brain" we find that the exigencies of practical book-making have been thoroughly fulfilled. The idea of incorporating the book on the brain and the one on the cord in one volume is a good one, being thoroughly in harmony with the spirit of the subject.

Lectures one, two, and three are devoted to the medical anatomy of the brain; then follows a discussion of the morbid physiology of brain symptoms. In succeeding chapters the individual cerebral lesions are systematically treated of. The author takes up the anatomy of the cord, the application of the same to the diagnosis of cord-lesions being subsequently considered. The book is written in a scientific spirit, and will prove of value to the studious practitioner.

The Diseases of the Prostate: their Pathology and Treatment. Comprising the Jacksonian Prize Essay for the Year 1860. By Sir Henry Thompson, Surgeon Extraordinary to His Majesty the King of the Belgians, etc. Sixth Edition. Philadelphia: P. Blakiston, Son, & Co., 1886. Pp. xii–237.

In preparing this last edition of his work, its gifted author has attempted a *résumé* of all that is known of the prostate and of its diseases at the present time. Evidences of a careful revision are accordingly seen in almost every section of the volume, much of the old subject-matter has been rearranged, and copious additions have been made. This is especially noticeable in the portions relating to the operative treatment of enlarged prostate, in which the conservative views of most earlier editions are somewhat modified, and the author's experience in suprapubic cystotomy and drainage through the perinæum is given at length. No mention, however, is made of the operations of some other English surgeons in the same field recently brought prominently before the profession in Europe, an omission which, in view of the statement quoted above from the preface, we were not prepared to find.

The author's exceptional skill and experience as a lithotritist make his record in connection with Bigelow's operation, especially as practiced upon patients suffering from enlarged prostate, a most exceptional one, the mortality out of 242 cases of the operation being only seven, or about three per cent.; less than half that reported by him to the Royal Medical and Chirurgical Society in 1878 as his experience up to that time. The many little additions to the book make it worth a reperusal, even to those familiar with its author's views up to this time.

A Manual of Diseases of the Throat and Nose, including the Pharynx, Larynx, Trachea, Œsophagus, Nose, and Naso-pharynx. By Morell Mackenzie, M. D. Lond., etc. Vol. II.—Diseases of the Œsophagus, Nose, and Naso-pharynx. Philadelphia: P. Blakiston, Son, & Co., 1884. Pp. viii–17 to 550.

The appearance of the second volume of Mackenzie's great work has been hailed with satisfaction by all who were so fortunate as to read Vol. I. Great as were the expectations raised regarding it by the latter, it is safe to say that they have been more than realized.

The work before us is a remarkable example of exhaustive study, and of thoroughly sustained effort. While the whole subject of the nose and naso-pharynx is ably presented and replete with valuable matter, it is to the section upon the gullet that the greatest interest will probably pertain. To this too little studied organ are devoted about two fifths of the book. It will be found to contain an admirable exposition of the views of the author as well as of every other possible authority, and must be regarded as an invaluable addition to the knowledge and resources of every one by whom it is read.

Practical Clinical Lessons on Syphilis and the Genito-urinary Diseases. By Fessenden N. Otis, M. D., Clinical Professor of Genito-urinary Diseases in the College of Physicians and Surgeons, New York, etc. New York: Printed for the Author. Press of G. P. Putnam's Sons. Pp. xvi–17 to 584. [Price, $2.]

This book was first published in 1883 by Bermingham & Co. The author tells us in the preface to this edition that the first edition is exhausted, and he has decided to reissue it, at an expense just sufficient to cover the cost of publication, as a student's edition. It is identical in matter with the first edition, but greatly improved in appearance. Dr. Otis informs us that during the year he proposes to issue a new edition from new plates, with much added and important matter. Dr. Otis's writings are thoughtful and thought-provoking, and, whether we agree with him or not, we can but be impressed with the honesty of his purpose. The book now before us is replete with carefully reported histories of cases illustrating the various topics treated of, and these seem to say: "Here are my facts. Judge for yourselves whether I am right or not."

While these "Practical Clinical Lessons" can not take the place of an elaborate treatise, they are of great value, embodying as they do the individual views of a master in his art, set forth in a pleasant, almost conversational style. When the promised revised edition appears, we shall deem it a privilege to give it a fuller notice.

A Pharmacopœia for the Treatment of Diseases of the Larynx, Pharynx, and Nasal Passages, with Remarks on the Selection of Remedies and Choice of Instruments, and on the Methods of making Local Applications. By George Morewood Lefferts, A. M., M. D., Clinical Professor of Laryngoscopy and Diseases of the Throat, College of Physicians and Surgeons. Second Edition, revised and enlarged. New York and London: G. P. Putnam's Sons, 1884. Pp. iv–101.

For such a small volume the title is rather extensive. It is essentially a collection of prescriptions for use in this special department of medicine. They will be found most useful to the general practitioner, and still more valuable are the excellent hints regarding the technique of laryngoscopy. We have seen a good many monographs upon this subject which contained less information than this little manual.

The Essentials of Histology, Descriptive and Practical, for the Use of Students. By E. A. Schäfer, F. R. S., etc. Philadelphia: Lea Brothers & Co., 1885. Pp. viii–245.

This is an attractive little manual. The practical part of the book, containing directions as to the preparation and mounting of specimens, is much briefer than in most works on the same subject; indeed, brevity is the prominent characteristic throughout. In some places the reader will regret that more details have not been given, but whatever there may be wanting in the text is supplemented by the admirable drawings, among which are some of Dr. Heitzmann's.

The type and binding are excellent. Strange to say, there is no index.

A Manual for Hospital Nurses and others engaged in attending on the Sick. By Edward J. Domville, L. R. C. P. Lond., M. R. C. S. Eng., etc. Fifth Edition. Philadelphia: P. Blakiston, Son, & Co., 1885. Pp. 96.

The fact that a book has reached its fifth edition is sufficient evidence that it has earned a place for itself, and therefore that it requires no commendation from the reviewer. The only criticism that we would offer is that it deserves a more enduring style of binding than the publishers have seen fit to give it. It certainly is worthy of better treatment.

A Compend of Surgery. For Students and Physicians. By Orville Horwitz, B. S., M. D., etc. Second Edition, revised and enlarged. With Sixty-two Illustrations. Philadelphia: P. Blakiston, Son, & Co., 1885. Pp. 156.

This is a "quiz-compend," and is better than many of them because it attempts less. It simply gives some of the prominent features of the more common surgical affections, and deals with the amputations and the ligation of the arteries.

The sixty-two illustrations which embellish it, being borrowed from standard surgical works, should have been acknowledged. There are two or three queer definitions, as, for example, "An incised wound is a division of the parts, more or less extensive according to the extent of the injury"; "A fracture is the division of a bone into one or more pieces, from violence."

Elements of Pharmacy, Materia Medica, and Therapeutics. By William Whitla, M. D. (Q. U. I.), Physician to the Belfast Royal Hospital, etc. With Lithographs and Woodcuts. Second Edition. London: Henry Renshaw, 1884. Pp. 602. [Renshaw's Manuals. Price, 10*s.* 6*d.*]

This book is elementary in its treatment of the subjects mentioned on its title-page, and, as more than a third of it is devoted to therapeutics, its scope in the most practical of all the branches of medicine is extensive, embracing a consideration of many important drugs that were unofficial prior to the adoption of the new British Pharmacopœia. The book is one of very decided value.

GENERAL LITERARY NOTES.

Among the new books and new editions published in Europe we note the following:

George Bell & Sons, London.—W. A. Lane, "Manual of Operative Surgery." (8*s.* 6*d.*) —— R. E. Carrington, "Dissections of the Human Body." (7*s.* 6*d.*)

Cassell & Co., London.—F. Treves, "Manual of Surgery." (3 vols., 7*s.* 6*d.* each.) —— J. F. South, "Memorials of the Craft of Surgery in England." (21*s.*)

J. & A. Churchill, London.—D. DeB. Hovell, "On Some Conditions of Neurasthenia." (1*s.*) —— P. Hood, "On Gout and Rheumatism," etc. (3d ed. 7*s.* 6*d.*) —— E. J. Waring, "Remarks on the Uses of Some of the Bazaar Medicines and Common Medical Plants of India." (4th ed. 5*s.*) —— S. J. Sharkey, "Spasm in Chronic Nerve Disease." (5*s.*) —— P. J. Freyer, "The Modern Treatment of Stone in the Bladder by Litholapaxy." (5*s.*)

H. K. Lewis, London.—R. D. Powell, "On Diseases of the Lungs and Pleuræ, including Consumption." (3d ed. 16*s.*)

Macmillan & Co., London.—T. L. Brunton, "Disorders of Digestion." (10*s.* 6*d.*)

Trübner & Co., London.—W. Pye, "Elementary Bandaging and Surgical Dressing." (2*s.*)

Félix Alcan, Paris.—A. Bouchardat, "Nouveau formulaire magistral." (26th ed. 4*fr.*) —— H. Truc, "Traitement chirurgical de la péritonite." (4*fr.*) —— W. Nicati et M. Rietsch, "Recherches sur le choléra." (5*fr.*) —— Durand-Fardel, "Traité des eaux minérales." (3d ed. 10*fr.*) —— A. V. Cornil et V. Babes, "Les bacteries." (30*fr.*) —— Maurin, "Formulaire magistral pour les maladies de l'enfance." (2d ed.)

Asselin et Houzeau, Paris.—P. Diday, "La pratique des maladies vénériennes." (6*fr.*) —— Lannelongue, "Coxotuberculose." (12*fr.*) —— H. Barth, "Du sommeil non naturel." (4*fr.*) —— De Beurmann, "De la médication abortive." (4*fr.* 50.) —— E. Brissaud, "Des paralysies toxiques." (3*fr.* 50.) —— A. Chauffard, "Des crises dans les maladies." (3*fr.* 50.) —— J. Déjerine, "De l'hérédité dans les maladies du système nerveux." (7*fr.*) —— M. Letulle, "Des pyrexies abortives." (4*fr.* 50.) —— Boinet, "Des parentés morbides." (5*fr.*)

A. Delahaye et A. Lecrosnier, Paris.—Martineau, "Leçons sur les déformations vulvaires et anales produites par la masturbation, le saphisme, la défloration et la sodomie." (3*fr.* 50). —— Leval-Picquechef, "Des pseudo-tabès." (3*fr.*) —— P. Lange, "Le pouls puerpéral physiologique," etc. (3*fr.* 50.) —— Saury, "Étude clinique sur la folie héréditaire." (4*fr.*) —— Blanc, "Le nerf moteur oculaire commun et ses paralysies." (3*fr.* 50.)

O. Doin, Paris.—C. Maygrier, "Terminaison et traitement de la grossesse extra-utérine. (4*fr.*) —— Auvard, "De la conduite à tenir dans les cas de placenta prævia." (4*fr.*) —— P. Bernard, "Des attentats à la pudeur sur les petites filles." (4*fr.*)

J. B. Baillière et Fils, Paris.—S. Rémy, "De la grossesse compliquée de kyste ovarique." (5*fr.*) —— A. Vautrin, "Du traitement chirurgical des myomes utérins." (6*fr.*)

G. Masson, Paris.—A. Fournier, "La syphilis héréditaire tardive." (8vo, pp. 652. 15*fr.*) —— J. Parrot, "La syphilis héréditaire et le rhachitis." (8vo., with atlas of plates. 25*fr.*) —— Léon Poincaré, "Traité d'hygiène industrielle." (12*fr.*) —— P. Diday, "Les herpès génitaux." (6*fr.*) —— E. Guibout, "Traité clinique et pratique des maladies des femmes." (6*fr.*) —— A. Lacassagne, "Précis de médecine judiciaire." (2d ed. 7*fr.* 50.) —— A. Milne Edwards, "Anatomie et physiologie animales." (18mo, 3*fr.*) —— W. D. Hogg, "Premiers secours aux malades et aux blessés." (12mo. 1*fr.*) —— Masse, E., "Kystes tumeurs perlées et tumeurs dermoïdes de l'iris." (5*fr.*)

Office of the "Progrès médical," Paris.—Féré, C., "Traité élémentaire d'anatomie médicale du système nerveux." (10*fr.*)

Georg Reimer, Berlin.—P. Dettweiler, "Die Behandlung der Lungenschwindsucht in geschlossenen Heilanstalten." (2d ed. 2*M.* 40*Pf.*) —— H. Reimer, "Klimatische Sommerkurorte." (4*M.*) —— T. Billroth u. A. v. Winiwarter, "Die allgemeine chirurgische Pathologie und Therapie." (12th ed. 14*M.*)

Leopold Voss, Hamburg.—J. Eisenberg, "Bakteriologische Diagnostik." (5*M.*) —— E. Fraenkel u. M. Simmonds, "Die ätiologische Bedeutung des Typhus-Bacillus." (5*M.*) —— H. von Helmholtz, "Handbuch der physiologischen Optik." (2d ed. About ten parts. 3*M.* each.)

C. Ricker, St. Petersburg.—A. Rauber, "Ueber die Bedeutung der wissenschaftlichen Anatomie." (40*Kop.*)

BOOKS AND PAMPHLETS RECEIVED.

Lehrbuch der Physiologie für akademische Vorlesungen und zum Selbstudium. Begründet von Rud. Wagner, fortgeführt von Otto Funke, neu herausgegeben von Dr. A. Gruenhagen, Professor der medizin. Physik an der Universität zu Königsberg i/ Pr. Siebente, neu bearbeitete Auflage. Mit etwa Zweihundertundfünfzig in den Text eingedruckten Holtzschnitten. Elfte Lieferung. Hamburg u. Leipzig: Leopold Voss, 1886. Pp. 241 to 400 inclusive.

A Treatise on Electrolysis and its Applications to Therapeutical and Surgical Treatment in Disease. By Robert Amory, A. M., M. D. (Harvard), Fellow of Mass. Med. Society, etc. New York: William Wood & Company, 1886. Pp. vii–1 to 307. [Wood's Library of Standard Medical Authors.]

Spinal Irritation (Posterior Spinal Anæmia). By William A. Hammond, M. D., Surgeon-General, U. S. Army (Retired List); Professor of Diseases of the Mind and Nervous System in the New York Post-graduate Medical School and Hospital, etc. Detroit: George S. Davis, 1886. Pp. 80. [The Physician's Leisure Library.]

Massage in Nervous Diseases. By George W. Jacoby, M. D., etc. [Reprinted from the "Journal of Nervous and Mental Disease."]

Molluscum Contagiosum, an Analysis of Fifty Cases. By Charles W. Allen, M. D., Surgeon to Charity Hospital. [Reprinted from the "Journal of Cutaneous and Venereal Diseases."]

The Medical Profession in Ireland and its Work. By E. D. Mapother, M. D., Consulting Medical Officer of Health for Dublin, etc. [Reprinted from the "Dublin Journal of Medical Science."]

Preliminary Notes on some of the Properties of Sodium Fluoride. By Louis Kolipinski, Pharm. D., M. D., etc. Washington, D. C. [Reprinted from "The Medical News."]

The Healing of Arteries after Ligature in Man and Animals. By J. Collins Warren, M. D., Assistant Professor of Surgery, Harvard University, etc. New York: William Wood & Company, 1886. Pp. 184.

Intussusception in Children. By W. E. Forest, M. D. New York. [Reprinted from the "American Journal of Obstetrics and Diseases of Women and Children."]

Surgical Lesions of the Brain and its Envelopes. A Lecture delivered at the College of Physicians and Surgeons, Chicago, Ill. By Nicholas Senn, M. D., of Milwaukee. [Reprinted from the "Medical News."]

I Vasi Linfatici nei Sarcomi. Pel Dott. Giuseppe Pacinotti. Ajuto alla Clinica Chirurgica della R. Università di Parma; già Assistente al Laboratorio di Anatomia Patologica nel Regio Instituto degli Studii Superiori in Firenze. Firenze: Tipografia Cenniniana, 1886.

The Modern Treatment of Eczema. By Henry G. Piffard, A. M., M. D., etc. Detroit: George S. Davis, 1886. Pp. 54. [The Physician's Leisure Library.]

Syphilis; the Prevention of its Dissemination. By John Alsdorf, M. D., etc. [Reprinted from the "Sanitarian."]

The Immediate Restoration of Parts to the Normal Position after Tenotomy. By Reginald H. Sayre, M. D., etc. Read before the Orthopædic Section of the Academy of Medicine, May 21, 1886. [Reprinted from the "Alabama Medical and Surgical Journal."]

Miscellany.

The Preliminary Education of Medical Students.—In its educational number, dated September 11th, the "British Medical Journal" says:

The theory of education has played a considerable part in all systems of philosophy since that of Plato, and of late has received even more general attention than hitherto; but, though fashions have often changed, yet few stable conclusions have been reached, and there is much ground left as yet for eager debate. During the last few generations the rapid growth of knowledge has changed the conditions, and made such an encyclopædic education as Milton sketched out more than two centuries ago quite too extensive to be possible nowadays; nevertheless, the practice of laying some broad foundation of non-professional training to professional knowledge gains ground and wins approval on all sides. The subject-matter of the medical profession is growing more difficult, or rather we realize its many difficulties more fully, and feel more bound to attempt to train its younger members to grapple with them; the profession, moreover, stands, on the whole, better in credit with its bankers and with the world, and is inclined to think it worth while to use some of its opportunities wisely enough in obtaining a more thorough general education.

The character of the general education to be sought after is not so easily determinable. After some warm controversy between the partisans of the old knowledge and the new as to the subjects to be taught, most of the best judges have arrived at a compromise, which one of them happily expresses by saying that science must come in, and language must not go out. More widely trained teachers, better schools, or "modern school" departments are necessary to carry out such a compromise, and are being slowly but steadily manufactured to meet the demand. But the teacher's profession, like most others that need skill and knowledge, is, as a profession, very conservative, and does not easily adapt itself to new molds; and in this matter the public has not clear enough perception of what it wants to be able to hurry on the supply. It is gradually becoming plain that we need not imagine all the advantages of a training in language to be bound up with Latin and Greek. The grammar of the classical languages may be the most reasonable and complete, but it is not the only grammar; and, at the outset of an education in language in England, it is much more rational to begin by teaching English grammar (for, indeed, there is such a thing, and it is well worth study) to pupils who have probably gained—they know not how—a considerable volubility in English sentences. It probably does not alter their speech much, but it may serve to introduce them to system, and show them that it is applicable to the most familiar things, namely, the words of daily life. So, too, any of the simpler branches of the sciences of observation of the outside world of nature may serve as the introduction to another field of system. Both paths lead on to abundant and profitable learning; the study of the English grammar leads on to the English literature, of which many of the treasures are now habitually passed by; the elementary science to the great generalizations of natural science which have had so strong an influence on our age.

It is, fortunately, not so often the case now as it used to be that purely professional education is begun in boyhood. There are not so many country apprenticeships served, not so many entrances made at medical schools before the age of seventeen, but more cases where a non-professional education has been allowed to run on to twenty-one, or even later, and the paths of barrister, doctor, and divine have lain together till they have come of age. Those who have intended throughout to seek medicine as a profession, and have had any capital to invest in themselves, have found a public school and university career a profitable as well as a pleasant investment.

The eagerness with which university degrees are sought shows that the public like to see something that they may fancy is evidence of a university life. The elder English universities (and of them Cambridge most readily and freely) have opened their doors and arranged their teaching so as to make themselves comfortable homes of learning for medicine as well as the other arts and sciences. If a university is doing its duty, it should make itself a focus of all kinds of knowledge, and always be able to hold up before its pupils the dry flame of truth, the pursuit of knowledge for its own sake, and offer thus what may prove to be one of the very few chances in life of coming into contact with true student habits that have for some people a rare fascination.

The education of the chief public schools, as it stands at present, may perhaps be thought too apt to lead along the old-established paths of learning exclusively. That, however, is being quickly altered even at the most conservative schools. A boy's classical education may fade easily, but it is no small addition to the knowledge of human nature and capacity to have gained some dim idea of the genius of Hannibal and the personality of Socrates, of the tale of Troy and the rhythm of Vergil; and what remains of any early education most deeply fixed is not mainly the facts and figures—whether they be of the natural sciences, or of grammar and language, or of the history of the world—but some notions, vague perhaps, but strong, of the extent of knowledge in this direction or that, and some generalizations that it may have cost the world centuries to supply, and along with these some love of knowledge, or at least some respect for it, based most probably on the recollection of the trouble that was necessary to acquire some small portion of it.

But we can not be satisfied with only a strong "bookmindedness," as Wordsworth called it; we want a practical education also, for we have to deal with living human beings, and it is of the first importance that as many lessons as possible should be learned of the varieties of human nature; and of such lessons the life at a public school and a university, apart from the knowledge taught there, supplies a noteworthy abundance, and affords a large contribution to one form of the *tactus eruditus* which the world specially appreciates and admires, and calls, in short, tact.

The American Rhinological Association will hold its fourth annual meeting in St. Louis on Tuesday, Wednesday, and Thursday, October 5th, 6th, and 7th. The programme includes the following: The President's address, by Dr. A. De Vilbis, of Toledo, O.; "A Mixed Form of Atrophic and Hypertrophic Catarrhal Inflammation (heretofore undescribed), and its Treatment," by Dr. P. W. Logan, of Knoxville, Tenn.; "Thoughts relating to the Naso-pharyngeal Tract," by Dr. J. W. Fink, of Hillsboro, Ill.; "Chromic Acid and Trichloracetic Acid in the Treatment of Hypertrophies of the Pharyngo-nasal Cavities," by Dr. J. A. Stucky and Dr. O. F. Brown, of Lexington, Ky.; "The Future of Rhinology," by Dr. Carl H. von Klein, of Dayton, O.; "Necrosis of the Nasal Bones," by Dr. H. Jerard, of East Lynne, Mo.; "Oleate of Quinine in Nasal Catarrh," by Dr. John D. Sympson, of Bloomington, Ind.; "New Methods in the Treatment of Catarrhal Inflammation of the Nose and Throat, including Diphtheria," by Dr. H. Marks, of St. Louis; "Treatment of Pruritic Catarrh (Hay Fever)," by Dr. Thomas F. Rumbold, of St. Louis; "The Use of Cocaine in the Treatment of Diseases of the Pharyngo-nasal Cavities," by Dr. J. A. Stucky, of Lexington, Ky.; "The Importance of Constitutional Remedies in the Treatment of Chronic Catarrhal Inflammation of the Upper Air-passages," by Dr. H. B. Logan, of St. Louis; "Treatment of Acute and Chronic Inflammation of the Superior Respiratory Passages," by Dr. W. G. Lipes, of Toledo, O.; "Colds in very early Infancy—how taken and how prevented," by Dr. H. F. Hendrix, of St. Louis; "The Importance of Early Recognition and Treatment of Naso-aural Catarrh," by Dr. N. R. Gordon, of Springfield, Ill.; "Is Hay Fever (so called) a Disease *per se?*" by Dr. J. P. Mathews, of Carlinville, Ill.; "Scarification in Nasal Hypertrophy," by Dr. A. G. Hobbs, of Atlanta, Ga. This is by far the most attractive programme ever issued by the association, and the meeting will undoubtedly be very successful and satisfactory.

The American Public Health Association will hold its fourteenth annual meeting in Toronto, on Monday, Tuesday, Wednesday, Thursday, and Friday, October 4th, 5th, 6th, 7th, and 8th. Persons intending to be present at the meeting, and desirous of securing reduced-fare certificates, should write to Mr. Theodore Covernton, Chairman of the Transportation Committee, Toronto, Ontario.

The "Lancet's" Address to Students.—In the students' number of the "Lancet," dated September 11th, we find the following excellent leading article: There are two different conditions of mind for which the medical profession proves equally attractive. These are the scientific or philosophical and the practical. They are not incompatible with one another, and medicine has need of both. So long as there remain in man unknown organic functions, unknown processes of disease and possibilities of treatment—and the end of that era we can not foresee—so long will there be room for the investigator, while the man of action will always find in medical practice a test of his endurance and resource. Happily, there is in medicine nothing which need sever, but much to unite, these two great types of intellect. By basing all its procedure on the proved attainments of science, it stimulates the spirit of inquiry, at the same time that it checks extravagant speculation, by requiring the tests of experience. It follows as a natural consequence that the best practitioner will be one who, from the beginning of his career, has learned with equal zeal the methods of his art and the reasons which guide their action. It is expected of such a one—and not in vain—both by the public and his medical brethren, that while following an approved system he will observe and think for himself, and will strive in this way to enrich the common working capital of knowledge. The student in like manner must seek to be more than one-sided in his aims and studies. The mere getting of a livelihood is not everything to him; nor, on the other hand, is fame or knowledge in itself the whole object of his efforts. He will early see that in his calling, more evidently perhaps that in any other, use and reasoning, practice and theory, mingle without confusion. The course of his studies, if he diligently follow it, will impress this fact upon him, and he will be wise if he neglect no part. Let him take together now the why and wherefore along with the facts of disease and treatment, and he will best promote his own after-success. The age at which a medical course may most appropriately be entered on is a matter for consideration. Often, indeed, the student has no choice. He may have to decide at a period of life when no time is to be lost. This is certainly better than beginning too early. Many youths go straight from school to the classes of a medical college. Some of these are doubtlessly qualified by age and by education to grapple successfully with the problems to be mastered in the study of their chosen profession. Others, we have little doubt, are less favorably placed. It seems to us, indeed, that for a majority of intending students of medicine a period not earlier than from the eighteenth to the twentieth year is the most suitable at which to begin their course. There are, of course, cases in which time or means available would oppose the working of this plan, and this point of age is not so vital that we need press it as an essential.

We now come to the question of degrees and qualifications. Henceforth, it is probable that a result of the latest movement in medical legislation, the Medical Bill of 1886, will be that no student will be legally qualified to practice until he has acquired a fair proficiency in medicine, surgery, and midwifery. This is so far satisfactory, and marks a distinct advance on the days of meager single qualification. It guarantees an average intelligence on the part of practitioners which ought at least to assure public security. At the same time, we would advise all students whose opportunities allow to qualify themselves as highly as possible. At this stage of their career advantages are open to them which they may never again enjoy, and they will do well to consider that such degrees as the Doctorate in Medicine of most universities or the Fellowship in Surgery, besides attesting, as far as any qualification can, their thorough fitness to practice, can often help them to appointments which go far to assure professional distinction. With all this, however, it must be remembered that ultimate success is purchased by a man's own work, and not by any mere degree. The student is sometimes at a loss to know which medical school he should select as his *alma mater*. There are now so many hospitals and schools well qualified to afford him instruction that he can hardly fail to have his need supplied in any recognized center of medical education in the three kingdoms. We would rather indicate what considerations are important in guiding his choice than name any one such center. These are thoroughness in clinical and practical teaching and the possession of sufficient material for this purpose. If in any case these requirements are well met, proficiency in teaching the theory of medicine and its allied sciences may usually be counted on.

Having thus considered the various arrangements introductory to the actual beginning of professional study, we come to speak of the methods which commonly lead to success in the course itself. A point too little regarded in all schools of our day is that the true object of education is to strengthen the mind by teaching rather than merely to fill it for a time. The student has it in his power to correct the cram tendency in his own case in a considerable degree. He will do this if he can assimilate as well as learn. He must observe and practice along with his reading, and he must endeavor to do this as far as possible for every study in its own order. It is with a view to his so doing that we have laid stress upon the value of practical teaching in the medical curriculum. Again, he should not try to carry on too many subjects at once. Let him be content to work well in each department of study in its turn, and he will then find each interesting in itself, and his interest will grow as time and progress in his work reveal to him the bearings of one on the other. Moreover, he will thus be saved the anxiety and the labor, fruitless of solid advantage, which is involved in cramming hurriedly a mass of neglected subjects on the eve of some examination. Success is most assured to the steady worker, even though he may not shine in the lists of class distinctions. We do not undervalue class competitions; on the contrary, they are in several ways useful helps in education. They engender and develop interest in study; they afford opportunities for revision of which there can hardly be too many; they mark the rate of progress to the student's own perception; while, by teaching him to arrange his ideas and express them exactly, they serve as tutors for professional examinations proper, and they train him in conciseness generally. It will not be found a good plan to select certain subjects for special attention and to neglect others. Justice to all should be the learner's maxim. Nevertheless, there are differences in the relative importance of studies. Speaking generally, we may say that during the first two years clinical observations can be only very partially understood. The junior student should not on that account, however, fail to attend the hospital. He is sure to learn something there; but by far the greater part of his time must as yet be given to the purely scientific subjects. He should strive to attain a mastery of anatomical and physiological facts, and should labor to be a good dissector. Having thus well laid a foundation in the first principles of his profession, he will follow with comparative ease their evolution in the practice of medicine and surgery, and the perversions wrought by disease will not be hard to trace. Professional examinations ought certainly to be encountered in their prescribed order. Even if he fail, the student will be better prepared for a next attempt, and he will be wise if he do his best to avoid the uncertainty, confusion, and imperfect work which would otherwise result from the grouping of many studies. As a rule he can hardly fail by taking this course, if he is reasonably steady in carrying through his work from day to day. Examiners have no interest in rejecting candidates, but the contrary. It is not their aim to spur competitors to outrun one another, but to maintain an average of proficiency which, if not low in face of the responsibility which their office entails, is not so high but that it should be reached by the great majority of careful students of fair intelligence.

There are matters connected with the plan of study to which we would draw attention. In acquiring a knowledge of medicine, the faculties of observation and memory are, on the whole, more tried and trained than any other. This is the more true because the learner must not only come to know, but must become familiar with his subject. He must in many cases carry away with him not merely a description but a mental picture of his work, and he will find that the most successful method of storing the mind is to forestall forgetfulness by frequent revision. Let him revise with all he learns anew, and revise very often. It is better to study by one's self than along with others, for in such pursuits concentration is everything. Many books do not bring much advantage, at least to young students. They rather confuse by offering different presentations of their matter. One good text-book, as a rule, or at most two, should suffice for a subject. It is a mistake to transcribe notes at home; many students waste time in this way, and allow their hours for study to pass in mere penmanship. While we are engaged with this theme another point suggests itself. Is there, after all, much profit in work which is done by the midnight oil? Sometimes, we grant, such work is unavoidable. As a general rule, however, we would recommend medical students and all reading men, whoever they may be, rather to study moderately in the evening and to make use of the morning hours. It is better thus to break in on work with timely sleep than, as some do, to drive away sleep with continuous application. If the plan can be carried out, it should certainly have a trial. Students do not always see the utility of junior and senior classes in a given subject. These are, nevertheless, in some cases an almost imperative necessity. On the principle of thorough revision the more important subjects should be thus reiterated in successive sessions. Anatomy, physiology, medicine, surgery, and midwifery are each deserving of such treatment, and the student must choose from his own sense of deficiency how far he will so favor some or others. Commonly the custom of his school will also guide him in this particular.

Apart from the merely scholastic side of student life there are matters of a more personal kind, which have yet so much to do with the result of a career that we should be loth to pass them by. At this period there are many opportunities for the formation of character, as also for the confirmation, and unfortunately also the perversion, of that which is already formed. Habits of life and work which arise at this stage are not easily forgotten. The student should be careful, therefore, to pay strict heed to the disposal of his time. Regularity and punctuality will help him much in his after medical practice. Their importance to him is not the least reason why his class attendances should be prompt and continuous. He will do well to recognize what some affect to despise—namely, the fact that class lectures, even if not always brilliant, have a real value for him, partly as decided helps to study and partly as preventives of idleness. Home reading alone will not do so well as this with a teacher's exposition. The true student is a class-man, and always has been where he could. Leisure time likewise has its use to all good workers, and its appropriate method. This is sometimes forgotten. We have known hard head-workers who also labored hard in physical exercise in the intervals of study. This is, we would say, as a rule, too much for the majority. For the student physical exercises have their place, and deservedly; but it should be the second place. The better plan for most is to make work the prime object, exercise the customary recreation. The importance of good food and fresh air may be noticed here. A liberal allowance of each is desirable. Stimulants may in most cases be omitted from the diet with advantage. As to companionship, a great deal might be said did space permit. A few hints may now suffice, for though the theory of selection in the case of friends may be well known to many, there are aged men who do not understand its application. Idle sets and vicious sets—the two are near of kin—abound in all colleges, certainly not only and not exceptionally in medical schools. The honest determination to work, and the unpretentious assertion in act of moral principle will secure the respect, if not always the approval, of any set, and will best pilot their fortunate possessor through the sometimes dangerous entrance to a successful future. The student who really has this end in view must early perceive and enter into the purpose of his profession, for here, as in all things, purpose is the very essence of character, as that is the beginning and end of success. Until he has acquired such a spirit his time will be equivalent to mere pastime in the name of work, and in the end will only bring him disappointment. The want of zeal, however, is fortunately not a common failing among medical students, and a man of energetic inclination is therefore not likely to lack either the aid of example or the spur of healthy rivalry. After all has been said and done, however, doubts and perplexities are not abolished. The student in every such case should not hesitate to consult his professional teachers, whom he will find equally willing and able to advise him. There may be at times yet deeper necessities for which no human guide is sufficient, and in regard to such let him not hesitate to take counsel of the supreme authority, whose power he daily sees revealed in the forms and functions which it is his lot to study.

The "Strangers' Cold."—Mr. R. Augustine Chudleigh writes to the "British Medical Journal": "Under its Maori name of murri-murri, I have been for eighteen years much interested in the St. Kilda cold, and everything connected with it. When Boswell and Johnson visited the Hebrides, in 1773, the disorder was evidently an article of popular belief, though the medical man himself had as little respect for the mysterious cold as for the Rev. Kenneth McAulay, who vouched for its existence. In 'Tour to the Hebrides,' Boswell says, at page 126, that, from his conversation, Dr. Johnson was persuaded that McAulay was not capable of writing the book on St. Kilda which goes by his name. And, at page 343, he waxes merry over the idea of people catching cold merely because strangers came; for, says he, if one stranger gave them one cold, two would give them two colds, and a ship-load would kill them. He further adds that the evidence was not adequate to the improbability of the thing; and not till a physician should go to St. Kilda and report the fact would he believe in its existence. It appears from your Journal that several physicians have visited St. Kilda since 1773, but they have not quite settled the question of *cnatan na gall* either way. May I, therefore, cite the case of the island of Wharekauri, one of the Chatham group, about 480 miles east of New Zealand, nearly at the antipodes of St. Kilda, where, under the name of murri-murri, an identical disorder, with a similar alleged origin, is now frequent. In its main features, murri-murri is indistinguishable from a severe influenza cold. Its invasion may occupy four hours; the patient remains 'intensely miserable' for about four days, when the disorder gradually dies away. No period of incubation precedes, and no permanent ill-effects are observed to follow. One attack does not preclude the recurrence, and European residents, as well as Maori and Muriori natives, are liable to the disorder. In order to be infected, a person need not know that a ship has come; indeed, the mere appearance of murri-murri is proof to the inhabitants—even at distant parts of the island, which is thirty miles long—that a ship is in port, insomuch that, on no other evidence, people have actually ridden off to Waitangi to fetch their letters. There is a hill whence one can see across the island into Waitangi Bay; and people are wont to climb this hill, and scan the bay for a ship, on no other evidence than the occurrence of murri-murri. It is very curious that the name of that hill is Mount Dieffenbach (see Mr. Dixon's letter, 'British Medical Journal,' page 286, 'Darwin quotes *Dieffenbach*, etc.'), and that the ship that would have been descried thence would almost certainly have been the *St. Kilda*, which, for many years, did the trade of the islands. There may have been connection between St. Kilda and Wharekauri."

Hydroleine.—Heretofore, to the best of our knowledge, says the "Medical Bulletin," there has never been manufactured an emulsion of cod-liver oil that was not subject to more or less separation of the oil from the vehicle under certain conditions of temperature. To patients who were not familiar with the properties of all cod-liver oil preparations this separation of the oil has been an objection, and in fact has created in many cases a suspicion that the preparation itself had undergone changes depriving it of its therapeutic value. Messrs. William F. Kidder & Co., of New York, after several years of investigation and experimentation with hydroleine (hydrated oil), have finally succeeded in making hydroleine so that it will keep indefinitely and withstand any degree of heat or cold without the slightest separation of the oil. Although the process of manufacture has been changed to improve the keeping qualities of the drug, the preparation remains the same as before, with the exception that it is now somewhat thicker than formerly. This improvement in the pharmacy of the preparation has not been made at the expense of its medicinal qualities. Hydroleine is just as effective as ever.

The New York Post-graduate Medical School and Hospital.—We learn that the summer session of this institution has been attended by twenty-five practitioners. The winter term began on Wednesday, the 15th inst. The building has been thoroughly renovated during the summer. Great advantage has been found to result from the union of a hospital with the school, since the gravest operations are now performed in the building, and the practitioner may watch the results from day to day. There have been no changes in the faculty.

Tape-worm in a Young Child.—Dr. James E. Whiteford, of Baltimore, sends us an account of a case in which a *Tænia mediocanellata* thirteen feet long was passed by a child eighteen months old. Dr. Whiteford found the patient very fretful, pale, and anæmic. She had little inclination to sleep, and when she did sleep she always lay on her stomach. Her appetite was seldom satisfied; she was always wanting the breast. This condition had existed since her seventh month. Diagnosticating the case as one of worms, the doctor gave the following prescription:

Calomel	3 grains;
Santonin	1 grain;
White sugar	10 grains.

Divide into three powders, one to be taken every three hours.

The next day the mother showed him some segments of a tænia that the child had passed, and he then ordered:

Fluid extract of male fern	15 minims;
Fluid extract of pomegranate	15 "
Oil of turpentine	1 fluidrachm;
Mucilage of gum arabic	3 fluidrachms.

To be given, after a fast of eighteen hours, at 6.30 A. M., and followed at 10.30 A. M. with a tablespoonful of castor-oil. At 4.30 P. M. the worm was passed, head and all. The child was somewhat prostrated at first, but soon rallied and is now in good health, having a natural appetite and sleeping well. The mother had been in the habit of giving the infant raw beef to suck, to keep her quiet, and that practice, Dr. Whiteford suggests, may have been the cause of the trouble. The case, he remarks, should remind us that very young subjects may be infested with tape-worm.

THERAPEUTICAL NOTES.

Antipyrine in the Infectious Diseases of Children.—Hildebrand ("Arch. f. Gynäk.," xxv, 3) reports under this title the histories of twenty-two cases of typhoid fever in young children in which antipyrine, in doses of eight grains, invariably produced a diminution of the fever-heat of at least 2° C. In some instances five grains lowered the temperature as much as 3° C. The course of the disease was not shortened, but the patients' condition was ameliorated, the mental disturbance being less marked than usual, and the diarrhœa and bloody evacuations checked. Slight depression was observed in three cases, severe collapse in three, and impending heart-failure in two. The amount of the drug given should be carefully regulated and the patient watched with more than ordinary vigilance. In scarlet fever and diphtheria the results were not so satisfactory as in typhoid fever. In these diseases antipyrine should be employed with great circumspection.

Gurjun Balsam in Gonorrhœa.—The "Centralblatt für die gesammten Therapie" gives the following formula:

Gurjun balsam, Mucilage,	each	1 part;
Infusion of anise		10 parts.

Dose, a dessertspoonful.

Hamamelis in Hæmorrhoids.—The same journal publishes this formula:

Fluid extract of hamamelis, Syrup of orange-peel,	each	1⅔ ounce;
Tincture of vanilla		20 drops.

Dose, a tablespoonful.

Ichthyol in Coryza.—The following mixture (*Ibid.*) is to be used as an inhalant:

Ichthyol	1 part;
Castor-oil	2 parts;
Alcohol	10 "

Iodide of Potassium in Diphtheria.—Stepp ("Dtsch. med. Woch.," 1886, 9) thinks this drug a specific in diphtheria, because of the thoroughness with which it is absorbed into the blood, whereby it "renders the bacteria innocuous." To children under three years of age he gives a teaspoonful, every hour, of a two- or four-per-cent. solution to which a small amount of tincture of iodine has been added. With older patients he uses solutions of from four to ten per cent. [It is not altogether unlikely that any good effect produced by this treatment is due to the topical action of the "small amount of tincture of iodine."]

The Galvanic Cautery in Diphtheria.—Bloebaum ("Dtsch. Med.-Ztg."; "Ctrlbl. f. d. ges. Therap.") applies cocaine to the affected parts, and then cauterizes them with the galvanic loop to kill the micro-organisms. Thus far he has tried the method only on the lower animals, of which he has thus cured sixteen out of twenty that had been inoculated artificially.

Sulphichthyol in Sycosis and Erysipelas.—Unna ("Ctrlbl. f. d. ges. Therap.") suggests this combination as an application for the cure of sycosis:

Sulphichthyolate of ammonium		1 part;
Oil of cade, Potash-soap (with excess of fat),	each	2 parts.

In erysipelas he uses the following:

Sulphichthyolate of ammonium, Ether,	each	10 parts;
Collodion		20 "

ANSWERS TO CORRESPONDENTS.

The Injection Treatment of Hernia and Hæmorrhoids.—An Illinois correspondent asks our opinion of operations for the radical cure of hernia by injections into the sac, also of the treatment of hæmorrhoids by injections. A few surgeons consider the method for the cure of hernia to be satisfactory and safe. It is to be remembered that most operations for the radical cure of hernia have been followed by only temporary success, the hernia reappearing after a varying length of time. The injection method does not seem to us to have been shown to be worthy of confidence.

As to injections of carbolic acid for the cure of hæmorrhoids, we would refer our correspondent to Dr. Kelsey's article published in our issue for November 14, 1885, page 545.

Fees of Noted English Physicians.—The "Boston Traveller" thus quotes from a London letter:

"'Do London doctors earn more than queen's counsel?' As a rule they do not, but the incomes of the three leading physicians and those of the three leading lawyers are about equal—that is to say, at the rate of $60,000 a year each. The largest sum ever earned in one year by a doctor was $100,000, made by Sir Astley Cooper. The three men at the head of the medical profession in England at the present day are Sir William Jenner, the court physician, Sir William Gull, and Sir Andrew Clark. Just lately the last named has obtained considerable notoriety. He was induced to visit a very wealthy lady at Nice, and he received the unprecedented fee of $25,000. One fifth of this amount he retained as a remuneration for his services, and the remainder he divided between two charitable institutions connected with his profession.

"Speaking of fees, there is a tale told of a rich colonial gentleman living in Kent who had the misfortune to take a slight cold. Not satisfied with his local medical attendant, he desired to have Gull down from London in consultation. Gull happened to be away and Sir William Jenner came instead. He was duly paid his fee of $375 for the visit. The patient, feeling no better, then sent to Edinburgh to a leading doctor of that city, who traveled the 400 miles in order to see him, and in ordinary course received a guinea for every mile, that was 400 guineas, or $2,100. Again the patient felt no better, and this time Gull was summoned and attended.

"'I suppose,' suggested the local practitioner, 'you will pay Gull what you paid Jenner—$375?'

"'Nonsense,' indignantly retorted the sick gentleman; 'I am not going to pay Gull less than I gave the Scotchman,' and he drew a check for $2,100. Before he got rid of his cold he had paid $7,000 in fees."

Lectures and Addresses.

THOMAS ALEXANDER McBRIDE, M. D.;

AN ACCOUNT OF HIS LAST ILLNESS.*

By D. B. St. JOHN ROOSA, M. D.

Mr. President and Gentlemen: Circumstances which I had no share in arranging made me one of the last professional advisers of the late Dr. Thomas Alexander McBride, and one of the witnesses of his ocean burial. The medical responsibility of the last day of his life, which was on board an ocean steamship, was shared with Dr. Norr, the surgeon of the Aller, of the North German Lloyd Line. The president of this society has requested me to communicate to you, the professional brethren of Dr. McBride, and some of you his personal friends, such facts of his last illness as may be of sufficient interest and importance for a public recital. I have hesitated somewhat to accept this invitation, lest what I might say should be considered as in any sense an adequate attempt to give an account of his professional rank and character. Such an attempt I am utterly unfit to make, for, while, like many of you, I had frequent opportunities to know in a general way of Dr. McBride's very considerable scientific attainments, and also of his genial and interesting manners, which made him so successful a practitioner, and which enabled him to increase the common stock of knowledge of the profession, I was almost a stranger to him when we sailed together on the steamship Trave for Southampton on the 19th of last June. But so many inquiries have been made of me by members of the profession as to Dr. McBride's last hours, that I have concluded to ignore all considerations except those which induce me to answer these inquiries. I am sure, therefore, that you will understand that the following statement is made simply as a matter of interest to those who knew our late associate either personally or through his writings, and not in any sense as a proper tribute to his memory.

To pay this will be the mournful duty of some one who knew Dr. McBride long and well. After we had sailed in June, upon a request sent to me, I went to see him in his room, not, however, as a medical adviser, but as a professional acquaintance. He was then apparently ill, suffering from nausea and nervous excitement; but he gave me no account of his health, except to say incidentally that he had been for years a gouty subject, that he was very tired, and that he was on his way to Carlsbad, which had done much for him two years before. I recalled the fact to his mind that I had met him at Dresden at that time, when he was returning from a course of treatment there. I recalled also that he then looked exceedingly well, and that he was very enthusiastic in regard to what had been done for him at the Bohemian watering-place, and the great qualities of Dr. Seegen. He gave me a note of introduction to this gentleman, for I was about to visit Carlsbad as a matter of professional education.

As I have said, Dr. McBride was then, in 1884, in apparently vigorous health, his figure had lost much of its excessive stoutness, his eye was bright, and there was a friendly and fascinating twinkle in it, which made one who had been almost a stranger to him feel as if he were talking to an old friend; but now, in 1886, even to a casual observer, his appearance was much altered and somewhat alarming. His face and hands were puffy, and his expression was anæmic, troubled, and painful. In a few days, however, he came upon deck, and was somewhat improved; but he was dull and listless, and shunned society. Although he had several distinguished acquaintances and patients on board, he kept away from them for the most part, and sat only with a friend, who was also going to Carlsbad upon his advice. We had a few conversations together, and I was much impressed by his talk. It gave evidence of profound study, acute observation, and wise deduction. There was no difficulty in seeing that his reputation as a clinician was well founded, and that he justly enjoyed the widespread confidence of the profession and the laity. We parted at Southampton, and the next time I saw Dr. McBride was about two months later, on August 28th, when he lay very ill in Radley's Hotel in that place. He had sent for me when he learned that we were about to sail together on the Aller on the following day. He was attended by a nurse, and there were two faithful friends of his, both of whom had been his patients, who had procured the nurse and were looking after his wants. I was told that he was much improved after leaving Carlsbad, that he had taken the water for three or more weeks, that he had gone about Berlin, and looked with great interest into professional matters; that he had returned to England and visited Tunbridge Wells, whence he had come to London, where he became quite ill; that his chief symptoms in London were nausea, thirst, and utter failure of appetite. He had received no professional advice until he came to Southampton, where he had been a day when I saw him. He now had a short distressing cough, he appeared to be constantly nauseated; he was very feeble, his skin was dry and harsh; there were frequent jerking motions of his arms; the urine was scanty, but his temperature was not materially elevated; his intellect was unclouded, and, in spite of his terrible case, his demeanor was calm and to some extent hopeful. He told me that he had Bright's disease and contracted kidney; that he considered the tremor, holding up his unsteady hand as he spoke, and the cough as bad symptoms. He said, moreover, that he had had three convulsions. He was evidently suffering from uræmia. He said that a physician had prescribed a diuretic, "which," he remarked, "I declined to take." In a few minutes he was much exhausted by the effort he had made in talking. He asked me to excuse him for a few moments and to come in again. When I did so, he gave me a brief account of what he had been in the habit of doing to relieve his condition in previous attacks, and he outlined what he thought it would be proper to do for his present symptoms. He told me that he was very anxious to get home, and he expressed the hope that the voyage might do something for him. As our ship had already been detained at Bremen three days, he had become, like other passengers waiting at Southampton, very anxious for exact news from the steamer. I saw him several times that day and the next. He had no more convulsions until we got on the ship. Although his friends had repeatedly assured him that he might give himself no care about getting to the wharf where the ship's tender lay, he was not content, but, assisting his nurse to dress him, he got out of his room, and was found dragging himself along the hall at about ten o'clock at night, actually afraid that he had been forgotten. At about twelve, midnight, we set sail, and, after seeing him in his berth, where he seemed more comfortable than in his room, the weather being fine and the port open, I left him for the night. During that evening he thanked the surgeon of the ship for his visit, and was perfectly clear in intellect, and took moderately of Rhine wine and Apollinaris. In the early morning of the 30th I found that Dr. McBride was greatly changed for the worse. There was considerable ocular œdema; there were numerous small hæmorrhages in the conjunctiva, with exophthalmos; his body was frequently twitching; he was very dull and heavy, but he easily aroused himself and complained of pain. Speech was very difficult on account of swelling or paresis of the tongue. He was given a hypodermic injection of cocaine by the ship's surgeon from a bottle which the doctor furnished us, and which we understood him to say was morphine. He had been in the habit of using this for attacks of pain for the preceding few weeks. He was very much quieter a few minutes after the injection. Dr. Norr and myself consulted very earnestly together in regard to his case, and we reluctantly decided that there was nothing to do beyond administering whatever nutritives and stimulants he might bear, together with hypodermic injections of morphine to relieve pain and restlessness. The use of calomel and enemata was discussed, but we thought him too weak for either. We considered that the uræmic poison had invaded the intellectual and respiratory centers, and that the prognosis was hopelessly bad. Two injections of sulphate of morphine were afterward given during the day, and he continued to take small quantities of milk and Apollinaris.

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* Read at a meeting of the Medical Society of the County of New York, September 27, 1886.

About noon he roused himself and sent for two of his friends and bade them good-by, and asked them to say farewell to others. A little later he recognized me, and expressed his satisfaction with some directions that I gave. But he sank more and more into a state of stupor, and at about 12.15, on the morning of August 31st, he quietly died from heart failure.

Although it does not fall within the province of this notice to give more than an account of his last illness, it may be proper to state what is pretty well known in the profession, in New York city at least, that Dr. McBride was a man of large mental capacity and of thorough academic and professional education. He was born in Wooster, Ohio, and was forty years of age at the time of his death. He was graduated from Kenyon College, where he stood second in his class. He was graduated in medicine from the College of Physicians and Surgeons in 1871. He had been both house surgeon and house physician in Bellevue Hospital. At the time of his death he was physician to the Presbyterian Hospital. For a man of his years he had a large practice, much of it among very important people, and he had acquired a considerable influence in social and medical circles. He was a close student, not only of medicine, but of many other subjects. He neglected the care of his own health. If he had taken the advice that he so wisely gave others, he might possibly have been alive to-day, although he told me that he never had been well to his recollection.

Immediately upon going on board the Aller, I sought out the ship's surgeon as to the feasibility of taking Dr. McBride's body to New York in case he died on the voyage. Hopes were held out to me that this could be done, but on Tuesday forenoon, the morning after Dr. McBride's death, the captain informed a committee of the passengers who waited upon him in order to induce him if possible to preserve the body, that he was unable to do so on account of the crowded state of the ship, the early period of the voyage, and the lack of material for properly caring for the remains. Of course this settled the matter, and arrangements were made to have the burial at sea. A little after twelve o'clock midnight, September 1st, those of the male passengers who had known Dr. McBride in life, preceded by two clergymen, the Rev. Dr. Buell, of St. Luke's Church of this city, and Canon Knowles, of Chicago, went by appointment to the forward part of the main deck of the ship, where we found the captain with several of his officers and a platoon of sailors standing around the coffin, which was wrapped in the American flag. After the reading of the service for a burial at sea, the body of our late associate was reverently consigned to the mighty deep of the North Atlantic.

LECTURES ON
THE DIAGNOSIS AND TREATMENT OF DISEASES OF THE CHEST.

DELIVERED BEFORE THE ASCLEPION CLUB,

By BENJAMIN F. WESTBROOK, M. D., Brooklyn,

PHYSICIAN-IN-CHIEF TO THE DEPARTMENT OF THORACIC DISEASES, ST. MARY'S HOSPITAL; PRESIDENT OF THE BROOKLYN PATHOLOGICAL SOCIETY; FELLOW OF THE AMERICAN LARYNGOLOGICAL ASSOCIATION; ETC.

Lecture V.

The Diagnosis of Some of the More Obscure Diseases of the Heart.

Mr. President and Gentlemen: While the diagnosis of valvular disease is generally easy, at least as far as its existence is concerned, there are other forms of cardiac disease, both simple and in association with other morbid states, that may elude our detection unless great care is exercised and the possibility of their presence always borne in mind. Prominent among these is the so-called gouty heart. Many persons are going about, unconscious of the fact that they are suffering from a deep-seated and dangerous malady, whose hearts and arteries, as well as other equally important organs, are slowly undergoing a degeneration which will inevitably prove fatal sooner or later, and whose security depends upon the timely recognition and treatment of the malady.

The pathology of this disease, though somewhat uncertain, particularly as regards its ætiology, has, nevertheless, been studied with great care, and many of the more important changes have been made out. The most difficult problems are those which concern the development of lithæmia, or the uric-acid diathesis. Owing to some disturbance, either in the digestive or in the assimilative functions, an abnormally large quantity of uric acid appears, which, combining with the alkaline bases in the blood, is found, in the form of urates, in the urine. It occurs in those who eat heartily of nitrogenous and hydrocarbonaceous foods, and whose digestive organs are frequently irritated by alcoholic and malt liquors; in those who combine free living with habits of inactivity, and where a predisposition to this form of disease is inherited.

They usually, if not invariably, suffer from chronic gastric or gastro-duodenal catarrh. Whether the appearance of the products of defective combustion is due to insufficient oxidation in the passage of the albuminoid elements through the liver, as has been so ably argued by Murchison and others, or whether the primary digestive act is ineffective, usually in the formation of abnormal peptonic substances which are incapable of proper assimilation, I am unable to say, though it has appeared to me that the possible truth of the latter supposition has not been fully appreciated by those who refer the entire trouble to disturbance of the hepatic function. The alterations in the semilunar ganglia found by Da Costa and Longstreth, if they should be proved to be, as these authors suppose, a primary lesion, would seem to indicate the presence of a somewhat general implication of the abdominal viscera.

The subject of the pathology of these splanchnic nervous centers is one which invites the attention of investigators, and which promises to be a fruitful field of inquiry in the future. Then the fact that the ingestion of other food substances, the fats, and particularly cane-sugar, is capable of inducing the condition of lithæmia, in some persons, by interfering in some way with the oxidation of albuminoids, requires more careful consideration. I suppose that the incomplete digestion of these matters might act in two or three different ways. In the first place, the irritation of the gastro-intestinal mucous membrane, resulting from the presence of organic acids, etc., might, through the reflex from the sympathetic ganglia of the abdomen, induce an abnormal condition of the liver interfering with the proper metabolic changes in that organ. Secondly, the absorption of such products into the blood of the portal circulation might, by direct irritation, embarrass the hepatic functions. Or, in the third place, it is possible that the presence of such abnormal substances in the stomach and intestine might interfere with the chemistry of digestion, and give rise either to abnormal combinations, which are absorbed and excreted by the kidneys, or to ill formed peptones, incapable of complete oxidation. The subject is open to speculation until we have more exact knowledge.

But, whatever the origin of these unhealthy compounds may be, their presence in the body gives rise to vascular and visceral disturbances, both functional and structural. Their effects upon the cerebro-spinal centers, inducing various functional disturbances, have been recently very fully considered by Professor Landon Carter Gray, of Brooklyn, and by Dr. C. L. Dana, of New York. What the results of their irritant action upon the sympathetic and vaso-motor centers may be, we are not now in a position to say; but there are certain well-known changes in the circulatory and urinary apparatus which are well known, and of the utmost pathological and clinical importance. It is altogether probable that the presence of uric acid in the blood is the direct exciting cause of the condition called, by Gull and Sutton, arterio-capillary fibrosis, in which there are marked anatomical changes in the heart, the vascular walls, the kidneys, and various other organs. These changes consist in a thickening of the middle and outer coats of the vessels, hypertrophy of the muscular substance of the heart, and, sometimes, overgrowth of its interstitial connective tissue, with fibrous contraction and granulation of the kidneys. Besides this, atheromatous degeneration of the aorta and other arteries, particularly those of the brain, is a prominent and frequently fatal lesion. According to Johnson, the changes in the smaller arteries are of the nature of an hypertrophy of the tunica muscularis.

The heart is usually hypertrophied; the aorta, sooner or later, atheromatous; and endocarditis, of a mild and chronic form, results in thickening and deformity of the valves, particularly those at the aortic orifice. The interstitial connective tissue, when it is affected, is thickened in patches, particularly in the walls of the left ventricle and the papillary muscles, with atrophy of the muscular elements, and, when this is extensive, the production of aneurysmal dilatation. The coronary arteries also at times undergo atheromatous degeneration. Another anatomical change, which I have frequently noticed, both ante and post mortem, is a cirrhotic condition of the liver.

It is a peculiarity of this generally diffused pathological condition that the renal disease may at times be less advanced than some of the other lesions, and no distinct symptoms of Bright's disease present themselves when the patient comes under observation. We then have to rely upon other symptoms for our diagnosis. This statement may be well illustrated by a case which came under my observation a few days ago. The patient was a lady, fifty-five years old, who had complained for a year or two of gastric disturbance, with flatulence, epigastric tenderness and palpitation, and occasional intermittency of the heart-beat. The occurrence of the intermittency was noticed by her as a sudden clicking sensation in the cardiac region with a "frightened feeling," as she described it. There was a constant tendency to diarrhœa, and the urine varied in its condition, being at one time loaded with pink urates, and again becoming copious and limpid. There was no headache or dizziness. She was troubled at times with pharyngeal and bronchial catarrh. Her medical adviser had not been able to find either albumin or casts in the urine. On the objective examination, I found the abdomen somewhat relaxed and tympanitic. The area of hepatic dullness was diminished, though the distension of the colon made the value of this point uncertain. The epigastric region was quite tender on pressure. No signs of a malarial enlargement of the spleen, which, as she said, had formerly existed, could be detected. The apex of the heart was in the mammillary line, under the sixth rib, and the pulsation was abnormally forcible. Both sounds of the heart were much louder than is normal, and the character of the sounds was altered. The aortic second sound was very loud and sharp, as it is often heard at the beginning of aortic regurgitation. It was transmitted upward to the root of the neck. Over the sternum, and extending about an inch beyond its left border, between the second and fourth costal cartilages, a soft, blowing murmur was heard, synchronous with the systole of the ventricle. It was barely audible at the apex. The radial pulse was rather small, but hard and resisting, ing, and the artery could be rolled to and fro beneath the finger. The tongue was red, and had a light yellowish-white coating.

The diagnosis, based upon the symptoms and physical signs, was that the left ventricle was hypertrophied, that the valves and aortic arch were atheromatous, and that there was general arterial degeneration. With this, we supposed the existence of chronic renal and hepatic disease. The diarrhœa, which was nearly always present, was undoubtedly conservative. In addition to the cardiac disease and atheroma, we generally find, in persons of the age of this patient, a tubular dilatation of the arch of the aorta—the result of loss of its elasticity.

When the disease is not so far advanced, the physical signs are less distinct; but we may still form a correct opinion of the nature of the disease by a careful study of the symptomatology. The signs to be relied upon are: a strong and resisting pulse, not greatly accelerated; hypertrophy of the left ventricle; abnormal heart-sounds; attacks of indigestion, with flatulence and the occurrence of a lateritious deposit in the urine; pallor of the face, or, in many cases, the appearance of dilated vessels in the skin of the cheeks; and the nervous symptoms of lithæmia. If the renal changes are well marked and the heart is strong, the urine is increased in quantity, but diminished in specific gravity; and this may alternate with the occasional occurrence of a copious brick-dust sediment. The pulse is usually slightly increased in rapidity, according to my observation, though Fothergill says that it is slow. I have not an accurate record of cases, but I think that in the majority of those that have come under my observation there has been some acceleration; indeed, I have come to regard a pulse somewhat more rapid than normal, with firm arteries, as a very suspicious symptom, even when no other evidences of disease exist.

Hypertrophy of the left ventricle is not always present. If it is absent, it might be maintained that we were not dealing with a gouty heart. But there may be disease of the aorta and coronary arteries without hypertrophy, and this disease may be of the same class as that in which the symptoms are more typical. For instance, in a case of angina pectoris which was received into the wards of St. Mary's Hospital a short time since, and which was reported to the Brooklyn Pathological Society by my colleague, Dr. Glentworth R. Butler, the ascending arch of the aorta was extensively diseased, the origins of the coronary arteries were atheromatous and markedly contracted, the aortic semilunar valves were thickened and deformed, and the papillary muscles of the left ventricle contained a large amount of fibrous tissue. The heart, however, was not hypertrophied. The kidneys were scarcely altered in size, but the capsules were adherent, and the surface, after their removal, was granular. In this case the aortic disease was diagnosticated by the alteration of the aortic second sound. These abnormal heart sounds are of great importance in the diagnosis of the obscure cardiac diseases. Da Costa has well said that "to find the sounds of the heart clearly and well defined is to know that no disease of the valves exists," though the statement would be still more accurate if the word *normal* were substituted for *clearly and well defined.* An acquaintance with the normal sounds of the heart is of more importance in the diagnosis of such obscure lesions as those we are now discussing than in examining for valvular disease. In the case just narrated the sounds were clearly defined, but they were abnormal in their quality; in the case alluded to in which hypertrophy, with general arterial disease, was present, they were abnormal both as to their quality and loudness. In other affections, to be spoken of farther on, the intensity of the sound is markedly diminished, though without the co-existence of hypertrophy or dilatation.

The digestive disturbances observed in patients suffering from a gouty condition of the heart and vessels are similar to those which occur in all who are subjects of this dyscrasia. In the more robust the appetite is good, the amount of food taken is considerable, and there may be for long periods little subjective evidence of dyspepsia. But they generally have a red and somewhat coated tongue, frequently a marked redness of the velum and pharynx, with naso-pharyngeal catarrh, and a bad taste in the mouth in the morning. The urine contains an undue amount of solids.

These disturbances were carefully studied by the late Dr. Thomas A. McBride, of New York, and described in an able paper on the "Diagnosis of the Early Stages of Chronic Bright's Disease." When the disease is further developed, and in persons of a less robust constitution, more marked symptoms of deranged digestion are observed. The acute manifestations of this indigestion are accompanied or followed by the appearance of large quantities of urates and some oxalates in the urine. The pallid and flabby appearance of some is in marked contrast to the round, rosy faces of others. In those who have a high color, the small cutaneous vessels become dilated and visible upon the surface as the disease advances.

When chronic nephritis has so far advanced, that the evidences of it are indubitable, the cardiac complication is often very prominent, and there is opportunity for an error in diagnosis. The physician may be misled into mistaking the symptom for the more fundamental lesion. When hypertrophy has occurred, and the pulsations of the enlarged heart become a source of distress to the patient, his alarm leads him to dwell upon this symptom as of paramount importance, and, if the urine is still undiminished in quantity, or even increased, as it will be until the final stage is reached; if he is somewhat dropsical and complains of dyspnœa and cough, he may so state his case as to mislead the diagnostician, unless the latter is accustomed to make his examinations thorough and searching. Even when the urine is examined, if this is done carelessly, no note being taken of the diurnal quantity or specific gravity, the failure to find albumin may confirm the mistake. When endocarditis and valvulitis have led to deformity of the valves and regurgitation at the aortic or mitral orifice, the diagnosis is still more difficult.

In the investigation of these cases, close attention should be paid to the history of the development of the disease. When no abnormal bruit is heard in connection with the heart's action, a discrepancy will be observed between the cardiac lesion and the other symptoms. There is more dyspnœa than would be found to accompany a simple, moderate hypertrophy of the heart, without valvular lesions. There is a marked tendency to pulmonary œdema, and the paroxysmal attacks of dyspnœa are of a different character from those consequent upon simple valvular disease. There is, further, a peculiarity in the heart-beat which I have observed in a number of cases of this kind, and which, though not by any means confined to this disease, is still somewhat characteristic of it. I refer to a reduplication of the sounds of the heart. It is not always easy to say which sound, but, from my own observation, I should think that it was usually the second.

Reduplication of the second sound of the heart occurs in many persons as a purely functional disturbance. It may accompany any pathological condition which increases the pressure in the pulmonary artery, and is, among these conditions, most frequently a symptom of mitral stenosis. Its liability to occur with the latter affection may lead to doubt in the diagnosis. For example, in 1885, a young man, twenty-six years of age, was admitted to St. Mary's Hospital suffering from dyspnœa, cyanosis, and general anasarca. About a year previously he had had an attack of what we thought, from his description, was acute nephritis. The symptoms had subsided, but never entirely disappeared, and finally the dropsy returned and was accompanied by great dyspnœa, cough, and digestive derangement. At the time of his admission he was very anasarcous, though still able to walk. The surface was somewhat livid, and the face was swollen, but not to the same extent as the rest of the body. The urine was deficient in quantity, and contained albumin. The pulse was small, rapid, and difficult to feel, on account of an œdema of the arms and hands. The heart's apex was displaced downward and outward. On auscultation, an unusually distinct galloping rhythm, caused by a reduplication of the second sound, was audible over the entire præcordia. The reduplication was one of the most distinct that I have ever observed. It was perceptible to the ear of the most inexperienced observers, and its prominence had given rise to much discussion as to the nature of the cardiac lesion. No lesion other than hypertrophy and dilatation accompanying nephritis was diagnosticated.

In advanced cases of this nature it is often difficult, or even impossible, to say which is the primary lesion; whether the disease of the heart has been developed in association with or as a consequence of nephritis; or whether the renal symptoms are the result of long-continued venous engorgement, due to cardiac insufficiency. When valvular disease is present, the diagnosis may be very obscure, but, at such an advanced stage, the treatment would be essentially the same in either case. The reduplication of the heart-sounds is sometimes heard in cases where the renal disease is not so apparent as in the one just narrated. A gentleman fifty-five years old, who has been under my care for a long time, suffers, almost exclusively, from dyspnœa and dyspepsia. The dyspeptic condition, with a tendency to urinary deposits, prevailed for many years, during which time his general health appeared to be good. Finally he began to experience some dyspnœa on exertion, and paroxysmal attacks of the most alarming character were induced by very slight causes. They are usually preceded, for a day or two, by increased tendency to dyspnœa on exertion, by a slight hacking cough, and the presence of a slimy, viscid mucus in the larynx and trachea. If no preventive measures are taken, the slightest disturbance, such as talking a little too long, a sudden movement, or some cerebral excitement, may precipitate the attack. This is characterized by marked cyanosis, with swelling of the jugulars; cold surface, particularly of the extremities, which are cold and wet; great labor in breathing, with a terrible sense of suffocation; cough and the occasional expectoration of a frothy sputum, which is usually tinged with blood. The pulse is rapid and small. On applying the ear to the chest, numerous moist râles are heard, especially at the posterior bases. They are both coarse and fine, though the very small subcrepitant râles heard in the ordinary forms of pulmonary œdema are not numerous. The dyspnœa does not depend upon any obstruction to inspiration, as in stenotic conditions of the upper air-passages, nor upon expiratory embarrassment, as in spasmodic asthma, but the exceedingly vigorous and rapid respiratory movements are simply those of a desperate effort to get more air by one who is suffocating. This patient has always, since he has been under my observation, had a diminution of the renal secretion. There is very slight dropsy of the lower extremities, and occasionally of the hands. Indigestion and flatulence are very troublesome symptoms. The heart is hypertrophied, the apex-beat about at the mammillary line. The second sound is very distinctly reduplicated, giving rise to the peculiar galloping rhythm. The radial pulse is strong and resisting to the touch, and runs at the rate of about eighty beats to the minute. In this case, as in the one previously detailed, there are no evidences of valvular disease. The reduplication of the second sound is a functional disturbance, dependent either upon the renal disease or on the conditions to which the renal disease owes its origin.

I am rather disposed to attribute it to the uræmic condition, because it is found in subjects of both the granular kidney and of the diffuse nephritis following acute parenchymatous inflammation. Potain, who considered this irregularity to be always due to a reduplication of the first sound of the heart, noticed its frequent occurrence in cases of the gouty or cirrhotic kidney. I have also observed it in those who were suffering from chronic parenchymatous nephritis. As to the sound affected, I confess my inability, in some instances, to determine it, though in some, and particularly in the case of the old gentleman just described, it is evidently the second sound which is doubled.

Original Communications.

TEN MONTHS' EXPERIENCE WITH PNEUMATIC DIFFERENTIATION.*

By VINCENT Y. BOWDITCH, M. D.,
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INSTRUCTOR IN THE BOSTON POLYCLINIC.

Mr. President and Gentlemen of the American Climatological Association: At the request of our secretary I appear before you to-night to give you the results of my experience in the last ten months with the "pneumatic cabinet" or "pneumatic differentiator" which Dr. Herbert F. Williams has introduced to the profession, and in asking your attention for a short time I shall endeavor to give you such thoughts and suggestions as have a practical bearing upon the use of the instrument to which our attention has been called so much of late.

We have had earnest and able discussions upon the physical properties and physiological effects of the cabinet, and it is now time for the profession at large to investigate the clinical results of this new method of treatment and to determine slowly and with fairness the position which it is finally to take in pulmonary therapeutics.

In giving my results, I bring before you no brilliant array of "cures," and to some the record may perhaps appear to be rather discouraging when compared with others in which the results obtained are apparently so much more successful than my own, but, when I tell you that my experience has encouraged me to continue the use of the cabinet in its improved form, it may convince you more strongly than mere words that I believe the instrument will find its place as a valuable addition to our methods of treatment in pulmonary diseases. Its true place can not be established until the experience of careful observers has been given to us years hence, and I wish to add my voice in urging the profession to investigate the matter fairly, and time alone will show whether the hopes of the strongest advocates of the cabinet are to be realized or not.

It will be impossible to give you detailed reports of my cases this evening, for I should consume too much of your time and weary you unnecessarily, but I shall endeavor to give as brief a *résumé* as possible of what has been accomplished, leaving the detailed accounts to be published with this paper, to be read by those who may feel interested in judging of the justice of my conclusions.

The usual meagerness of description in printed records of cases, and the consequent inability of the reader to judge of the fairness of the author's conclusions, must be my apology for publishing what may seem to some too detailed accounts of my own cases.

Since June 30, 1885, I have treated twenty-seven cases with the pneumatic cabinet, the various affections being classed as follows: Pulmonary tuberculosis in its acute and chronic forms; phthisis, both non-tubercular and of questionable tubercular origin; bronchitis in its acute and chronic forms, with and without emphysema and asthma, and retraction of the lung from long-standing pleuritic effusions.

In this classification I have used the term tuberculosis in those cases only in which bacilli have been found in the sputa.

Of *two* cases of well-advanced *acute tubercular disease* (Nos. 1 and 2), there was marked alleviation of symptoms in one, and in the other no benefit at all was noticed.

Of *three* cases of *incipient pulmonary tuberculosis*, two (Nos. 5 and 7) received, in four and eleven treatments respectively, no benefit, and one (No. 24) was *cured*.

Of *three* cases of *chronic bronchitis*, one (No. 20) took but one treatment, another received no benefit (No. 18), and the third (No. 23) received moderate benefit.

Of *ten* cases of *chronic pulmonary tuberculosis*, two, not far advanced (Nos. 9 and 11), received such benefit that for varying periods they could have been called "well" except for the physical signs which proved the contrary, two (Nos. 3 and 22) received little or no benefit, four (Nos. 4, 6, 12, and 15) received marked benefit for several months, and one case (No. 21) received slight benefit in a few sittings.

Of *three* cases of well-advanced *phthisis*, probably tubercular, one (No. 8) received temporary benefit, another (No. 14) little or no benefit, and the third (No. 17) marked benefit for several months.

Of *three* cases of simple bronchitis varying in intensity and duration (Nos. 16, 19, and 27), great improvement was noticed immediately after treatment was begun, and two may be said to have been cured, although I have not tabulated them as "cures."

Of *two* cases of retracted lung from either long-standing empyema (No. 10) or serous pleuritic effusion (No. 25), marked benefit was noticed.

In *one* case of *non-tubercular phthisis* (No. 13) great benefit was noticed.

In *one* case of *tubercular bronchitis* which has only lately begun to take treatment (No. 26), temporary benefit can certainly be noticed.

Table showing the Proportion of Cases of Benefit from the Use of the Cabinet.

None.	Very slight, moderate, or temporary.	Marked for varying periods.	Remarkable.	Cures.	Treated but once, and not taken into calculation.*
Nos. 2, 3, 4, 5, 7, and 18 (5 in all). 19+ % of whole number treated.	Nos. 8, 14, 21, 22, 23, and 26 (6 in all). 23+ % of whole number treated.	Nos. 1, 4, 6, 10, 12, 13, 15, 16, 17, 19, 25, and 27 (12 in all). 46+ % of whole number treated.	Nos. 9 and 11 (2 in all). 7+ % of whole number treated.	No. 24. 3+ % of whole number treated.	No. 20.

In thus tabulating my cases in regard to the comparative number which have been benefited by the treatment, I think I can in justice say that, if I have erred in either direction, it is in not giving the cabinet sufficient credit for what has been accomplished. As an instance of this, I can cite the three cases of bronchitis (Nos. 16, 19, and 27) which I have included with those in which "marked benefit" was noticed, and not with those in which "remarkable benefit" followed the treatment, and yet even with a disease of this nature, which we know usually is cured in time without medical aid, the sudden cessation of marked symptoms after the first or the second sitting was something which the most prejudiced observer could hardly have failed to notice.

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* Read before the American Climatological Association at its third annual meeting.

You will remark that out of the twenty-six cases of various pulmonary diseases treated, I have recorded but one as a "cure," and this leads me to say I can but think that in many of our records of cases we are more hasty in giving such results than justice would allow. "Arrest of disease," in which symptoms apparent to the eye and ear have ceased completely for a time when morbid signs still exist in the body, is a very different thing from "cure" in which every morbid sign, both objective and subjective, has disappeared. We so often read of "cures," and upon strict inquiry find that a renewal of morbid symptoms has begun soon after the reported favorable termination, and the oftener we hear of these cases the more skeptical we become in reading of the successful experiences of physicians who neglect to give sufficient data in their records, and are too hasty in coming to positive conclusions. To illustrate my meaning, allow me to read the records of two of my cases, Nos. 9 and 24.

In case No. 9, for four or five weeks, as far as external appearances were concerned, one would have been perfectly justified in discharging the patient as "cured," but the subsequent history proves the injustice of such a claim. In the other, however, the complete disappearance of every morbid sign, both subjective and objective, is sufficient ground for me, I think, to allege a "cure" even in the short time which has elapsed since treatment ceased. To allay possible doubt in the minds of some as to the presence of bacilli in the sputa in this case, I will merely add that they were found by my assistant and their presence corroborated by Dr. W. W. Gannett.

In giving treatment with the cabinet I formerly used from 0·8 to 1 inch depression of the barometer (that is to say, of course, from 0·4 to 0·5 of an inch as marked on the U-tube of the cabinet), but I now rarely go beyond 0·6 of an inch, as it seems to accomplish its purpose as well, and is not so apt to weary the patient. In every case except one I have exhausted the air always, but in one case of chronic bronchitis with slight emphysema I have reversed the process as an experiment for six sittings by compressing the air in the cabinet, but resumed the former treatment, no special difference in the general signs being noticed in the change. I have had no cases of very marked emphysema, and therefore am unable to say from my own experience whether rarefaction or compression of the air in the cabinet should be used. It certainly seems rather paradoxical that an emphysematous lung should be benefited by breathing into an atmosphere denser than that surrounding the body, but Dr. Williams has had two or three cases which have nevertheless improved under this treatment. We can not suppose that the elasticity of the lung will be increased when the elastic tissue has diminished or disappeared, as in the case of emphysema, and improvement can only be explained, I think, by the tonic effect which the treatment seems to have. The treatment by alternate rarefaction and compression I am unable to speak of, as the cabinet in my possession at present is not constructed like the more recent ones.

The various medicaments which I have used in the spray are as follows:

1. ℞	Tincture of iodine	♏xlviij;
	Gardner's pine-needle extract	♏xv;
	Glycerin	ʒj;
	Water	℥iv.

Mix and use as a spray.

2. ℞	Phenyl	gtt. xxx;
	Glycerin	ʒij;
	Water	℥viij.
3. ℞	Creasote	gtt. v–x–xx;
	Glycerin	q. s.;
	Camphor-water	℥j.
4. ℞	Corrosive sublimate	1 gramme;
	Glycerin	q. s.;
	Water	1,000 c. c.
5. ℞	Comp. tincture of benzoin, Tincture of cubebs,	āā ʒij;
	Tincture of hops	℥j;
	Carbolic acid (pure)	ʒss.;
	Glycerin	ʒiij.

Mix and use as spray.

Camphor-water has been used alone also, and "terebene," a preparation of oil of turpentine with sulphuric acid, has been used by pouring a few drops on a cloth tied over the end of the inhaling tube in one case of chronic bronchitis. Of these I give no special preference to any one, but I rarely use the iodine spray now, as it seems more irritating and causes more cough in the cabinet than the other solutions. Phenyl seems often to have a soothing effect upon the throat, and its deodorizing power was very marked in one case with offensive sputa. The compressed-air spray has been used in every case except in those of retracted lung from old pleuritic effusions in which no spray was used, and in one case of chronic bronchitis (No. 23) in which I tried the steam spray, with the benzoin solution (No. 5), without marked effect.

Of the germicidal effect of any of these inhalations in the lungs themselves I am very skeptical, and the only supposition which seems to me at all plausible is that they may possibly make the unaffected portions of the lung an unfavorable bed for the bacilli. Even in the case of the corrosive-sublimate solution in strength of 1–1,000, we can not calculate possibly how much of the spray had been made inert by its contact with albuminoid matter before it reaches the lungs.

As to the amount of spray carried into the lungs, I can not help thinking that even five per cent. of the whole amount used is a generous estimate. By a set of experiments I have been led to believe that not more than five or six per cent. is carried into the mouth, and of course it is impossible to calculate how much of this is deposited in the oral cavity, the pharynx, larynx, and trachea. Having recorded the results of treatment and the methods pursued, I will now speak of the unpleasant or dangerous symptoms which may have occurred at any time while the patients have been in my care. The first and most important is that of *hæmorrhage.*

In the twenty-seven cases which I have treated, apart from the mere occasional expectoration of bloody sputa, which is of such frequent occurrence in all phthisical patients, I have had four cases of hæmorrhage, none of them occurring during treatment. Of these, one only was very severe in a case (No. 7) of incipient tuberculosis combined with acute bronchitis, in which the cough had been one of the most distressing I have seen, and the hæmorrhage occurred *three days* after the use of the cabinet and immediately after a long and severe fit of coughing.

In the second (No. 4), a long-standing case of chronic tuberculosis, in which there had been slight hæmorrhages before I saw the patient, there was a moderate hæmorrhage, occurring several hours after treatment, followed by two or three slight ones in the succeeding fortnight. After cessation of treatment for about a month, it was again begun, and no further trouble has been experienced, and improvement has again been noticed.

In the third (No. 15), a long-standing case of chronic tuberculosis, in which there had also been slight hæmoptysis before the patient visited me, a mouthful of blood was raised *fourteen hours* after treatment, and coincident with acute congestion of the lower part of one lung, followed by acute pneumonia, which terminated in the death of the patient four days later, the attack being attributed to fatigue and exposure to wet.

In the fourth (No. 11), a case of chronic tuberculosis not far advanced. There was a very slight hæmorrhage (about one third of a tumblerful of blood) *forty-eight hours* after treatment, and no ill effects noticed.

From the records of these cases I can not believe that we are justified in attributing the cause of the hæmorrhages to the use of the cabinet, and certainly, from my experience thus far, the amount of benefit derived from its use greatly exceeds its possible disadvantages. The only symptoms complained of occasionally in the cabinet have been slight fullness of the head, or headache, when beginning treatment, and of weariness; but these sensations are exceptional. The exhilarating effect of the treatment, on the contrary, has been frequently spoken of by the patients.

I can not help hoping that the cabinet may yet show that its largest sphere of usefulness will be in those cases where the morbid process has only just begun. In my selection of cases I have refused none, no matter how far advanced, provided they could accommodate themselves reasonably to my demands, and in some cases, where all other treatment seems to have failed, the cabinet has been of assistance. I believe, too, that good effects are sometimes seen after patiently giving the treatment for several weeks under the most discouraging circumstances, and I therefore advise that, unless marked deleterious effects are noticed, treatment of chronic cases should not be abandoned too early, and the good effect may be then noticed after the cessation of treatment. On the other hand, I now refuse all cases which can not be within reasonable traveling distance of the cabinet, for long journeys are apt to counteract all the possible good effect of the treatment.

In all records of cases it is impossible to convey to the reader by words the same picture which the writer has in his mind after watching patiently, it may be for months, the condition of the patient under his care. Possibly it may seem to some who read the records of my cases that I have claimed too much, in which case I can only ask those who doubt to make a fair trial of the cabinet themselves, and to give their results to the profession, for in this way only can we arrive at just conclusions.

My opinion, then, of the "pneumatic cabinet" may be thus briefly stated: That, although in my hands it has not accomplished perhaps all I had been led to hope, yet I still feel that it has, at least, shown itself to be a valuable aid to us in pulmonary therapeutics, and I look with hope to see what it can accomplish in the future. I feel strongly that it is not yet safe to intrust it to any other than a physician's care, or to that of an intelligent assistant, for we are not yet sufficiently sure of its power for good or possible harm, and therefore, while I believe it should be thoroughly tested in hospitals and in private practice, the greatest care should be taken not to allow it to fall into the hands of unreliable persons.

If the future should possibly show that the treatment of pulmonary diseases by means of "pneumatic differentiation" has not accomplished all that has been asserted for it, we have at least the proof that the cure of phthisis is not to be accomplished by means of antiseptic inhalations as thus far used, for it is hard to conceive of any more thorough method than this of bringing vapors into direct contact with the lung tissue, and for this result alone the profession would owe a large debt of gratitude to the originators of the pneumatic cabinet.

In conclusion let me say that, while I have been pleased with the tone of the medical press in many cases in the criticisms of this new method of treatment, I have regretted the ungenerous and rather ill-natured remarks which have occasionally appeared in articles during the past year.

Honest criticism from those whose desire is to do their share in the progress of medical knowledge should be encouraged as freely as unjust fault-finding, from whatever cause it may arise, should be condemned by our profession.

Of my belief in the sincerity and single-mindedness of the originators of "pneumatic differentiation" in their desire to have its merits thoroughly and fairly tested, and its true position determined by the profession at large, I am glad thus publicly to give my testimony.

CASE I.—June 30, 1885. Mrs. F., aged twenty-three; married one year; no children; father died of consumption; mother and one brother living and well. Patient perfectly well up to six weeks previous to first visit; never had had the least cough before; took cold, had headache, two weeks later cough began with yellowish sputa, both symptoms increasing steadily, feverishness, vomiting; once copious night-sweat; pain at first in right shoulder; none since; at times much dyspnœa and sense of oppression on chest; marked loss of flesh (twenty pounds); constipation; amenorrhœa for two months.

Physical Examination.—Face pinched, dusky, with a very phthisical look; chest emaciated and rather hollow; gait stooping; dyspnœa very marked; percussion shows slight inelasticity in the right chest compared with left; in back, dullness throughout right. Auscultation reveals less distinct respiration on right than left front, and after cough faintest possible "crumpling" in the lower part of right; voice nearer on right, but not bronchial. On the back, faint "crumple" with cough and full inspiration, most marked in lower part of right; voice nearer and rather bronchial in character; expiratory murmur more marked; respiration throughout right of rather bronchial character; pulse 116; temperature 100·2°; examination of sputa reveals bacilli.

Diagnosis.—Acute pulmonary tuberculosis. Patient was examined by Dr. H. I. Bowditch and later by Dr. Herbert F. Williams, and a grave prognosis given. In the following four weeks the patient took twelve or thirteen treatments in the cabinet, using iodine alone or iodine with Gardner's pine-needle extract as an inhalation, and, although the physical signs showed a steady increase of the disease, the most distressing symptoms—viz., cough, loss of sleep and appetite, and dyspnœa—were greatly relieved. The expectoration became more profuse, but the voice grew stronger and the general condition improved.

From August 1st to September 23d (about seven weeks) the patient continued to come in from Cambridge three times a week with occasional omissions, but grew gradually weaker, although suffering very little from the previous symptoms, except vomiting. Physical examinations during this period showed increased consolidation of the right lung in the lower part and signs of the formation of cavities, marked by increased dullness, with coarse and fine bubbling râles, bronchial and amphoric breathing in different portions of the lung. Temperature and pulse were usually slightly elevated. From September 23d to October 25th the patient was too weak to come in town, and at the last examination evidences of a large cavity in lower part of the right lung were found. Patient died October 26th, about four months after the first treatment. Patient took thirty treatments in all, using from 0·2 to 0·8 depression of the barometer.

The compound tincture of cinchona in drachm doses was ordered at first and a cough syrup; afterward "bovinine" was given, and a zinc and belladonna pill for night-sweats.

Synopsis of Case.—Acute pulmonary tuberculosis in advanced stage. Treatment given thirty times.

Result.—Marked amelioration of most distressing symptoms; death of patient in four months.

Case II.—July 2, 1885. Miss F., aged fifteen; father healthy; mother died of consumption. Patient was well until about one month before first visit; slept with her mother before the latter's death; first had pain in left side, later a dry cough, scanty expectoration; once a small amount of blood; slight dyspnœa upon exertion; headache, loss of flesh and strength, appetite good, vomits when coughing, bowels regular, never flushed nor chilly, menses regular. All the unfavorable symptoms had greatly increased when I first saw her, and the cough was very troublesome.

Physical Examination.—Patient thin and tall, bright-eyed, rather puny. Percussion reveals rather less resonance than normal in upper left chest; dullness in lower third of left back. Auscultation reveals a slight crepitus under left clavicle. In back, rather less vesicular respiration on left, with a slight "crumple" at the top and fine crepitation in lower third. Power of chest expansion, 33 to 34 inches; temperature 99·2°; pulse 84. Bacilli were found in moderate quantities in the sputa.

Diagnosis.—Acute pulmonary tuberculosis. Patient examined by Dr. H. I. Bowditch, and a very grave prognosis given. Between July 2d and August 10th, when the patient ceased coming, she took nineteen treatments, taking iodine with pine extract chiefly, and once or twice carbolic acid, 1 to 200, and $HgCl_2$, 1 to 2,000, as an inhalation. From 0·2 to 0·8 inch depression of the barometer was used generally. At the last examination, August 10th, the dullness in the lower left back persisted, the râles were of a coarser character, and in places the respiration was bronchial.

With the exception of a slight increase of strength for a short time, I could not see the slightest benefit from the use of the cabinet in this case. The patient was imprudent and never seemed to take the treatment easily. After August 10th I did not see her again, but heard that she died October 6th, about two months later, with all the symptoms of rapid consumption. The only medicine given was the compound tincture of cinchona at first, and later Fellows's syrup of the hypophosphites.

Synopsis of Case.—Acute pulmonary tuberculosis. Treatment given nineteen times.

Result.—Little if any benefit obtained from the use of the cabinet. Death of patient in three months.

(*To be continued.*)

INTUBATION OF THE LARYNX.

By IRWIN H. HANCE, M. D.,
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The treatment of membranous croup by intubation of the larynx, as introduced by Dr. O'Dwyer of this city, is attracting a considerable amount of well-merited attention among the medical profession. No comparisons as to the merits of this operation, as opposed to tracheotomy, can be drawn until a more extensive use of O'Dwyer's tubes has been made and the results reported; consequently I wish to add to the previous records the histories of such cases as have occurred in the hospital:

Case I.—Ellen L., admitted to hospital March 20, aged thirteen and a half months. Bottle-fed; sick immediately after admission, and, on March 29th, was treated for pneumonia.

April 2d.—Temperature up to date has been elevated, and this morning is 102·8° F.; last night she coughed croupy. Tonsils, fauces, and uvula are thickly covered with membrane; respirations are labored; she was vomited with ipecac and whisky, and was relieved of her dyspnœa until the evening, when the same dose failed to produce emesis. There is now well-marked dyspnœa, with supra-sternal depression. Face pallid, and the child much exhausted. Temperature 103° F. At 8.50 P. M. O'Dwyer's smallest tube was introduced by Dr. Ludlow, and considerable mucus was withdrawn during the operation.

The respirations became easier, and the appearance of the child was better. Two hours later the tube became clogged up, and was coughed out on the floor; it was reintroduced about twenty minutes later; the thread was not removed from the eye of the tube. At midnight the child was much exhausted, but responded well to stimulation, and fell asleep after her throat had been sprayed and cleaned.

3d.—During the night she swallowed fluids freely, slight spasm was caused by deglutition, but the dyspnœa was very short. Treatment consisted of stimulation and alimentation, both by the mouth and rectum.

2 P. M.—The nurse reported two bad spasmodic attacks of dyspnœa, in which respirations were temporarily suspended and her face became cyanotic. Child much exhausted. Pulse weak and rapid. Respirations much worse.

3.15 P. M.—Attempts were made by Dr. Ludlow and myself to remove the tube, but they were unsuccessful.

4.30 P. M.—Large pieces of membrane were removed from the fauces. A careful search showed that the tube was not in the larynx. Suddenly the child ceased breathing and the heart stopped. All efforts to resuscitate the child were unavailing.

Necropsy fifteen hours after death.—Membrane extended down to the bifurcation of the bronchi. There was a slight congested spot in the larynx, but no signs of any erosion of the mucous membrane. There was broncho-pneumonia of both lower lobes, more extensive on the right side. The tube was found in the stomach with the thread attached to it.

NOTE.—During the morning of the second day the thread disappeared, and must have been swallowed. This fact gives an explanation of why the tube was swallowed: During the attack of dyspnœa, which occurred in the afternoon, the tube was probably coughed up, and the thread, being grasped by the involuntary muscles of the pharynx and œsophagus, offered sufficient resistance to draw the tube into the pharynx. This is the only solution I can offer, and it is certainly strengthened from the fact that the tube was previously coughed out on the floor.

CASE II.—William G., born in the hospital, aged fourteen months; nursed; a strong and healthy child.

April 11th.—Reported croupy at 2 P. M. No membrane to be seen in throat; tonsils and pharynx are considerably inflamed. Temperature 104° F. Vomited with ipecac, and counter-irritation applied to chest and throat.

12th.—He was vomited once again, but relief was so very temporary that I decided to introduce the tube, which was accomplished at 11 A. M., after several attempts. Respirations immediately improved, and the child fell asleep.

5 P. M.—Child has taken small quantities of fluid at frequent intervals, and has been very comfortable during the whole day. Without any premonitory symptoms the child stopped breathing; the nurse performed artificial respiration until my arrival, when I found the child extremely cyanotic and scarcely breathing. A finger was introduced into the throat, and thick mucus, with pieces of membrane in it, was withdrawn. Respirations became better, and continued fair for a short time. Temperature 106·4° F. The tube was removed at 6.10 P. M., and cleaned, then reintroduced at the first attempt. After this respirations became much easier, color rapidly returned, and the child was more quiet and very much brighter.

11 P. M.—He has swallowed easily since the tube was inserted. When lying in the nurse's lap he suddenly choked up again, and became cyanotic. The tube was quickly removed, and the child breathed when the tongue was drawn forward. Respirations were very labored and but little air passed into the lungs. The child grew worse and died after a terrible struggle, lasting two hours. Death undoubtedly was caused by an extension of the disease into the smaller tubes.

CASE III.—William C., born in the hospital, aged twenty-three months. Three months ago he had an attack of membranous croup, which was cured by the free use of emetics, twenty-five doses of alum (ʒ j) in glycerin being given in the eight days that he was sick. Following this he had a croupous pneumonia of the left lower lobe, which had not regained its normal condition when he was attacked with diphtheritic croup.

May 6th.—Early this morning he was reported croupy; membrane was present over the whole right side of the fauces, and a small amount was seen on the left side. Temperature, 102·8° F.

7th.—Emesis was produced three times yesterday and during the night by single doses of ipecac; the last dose caused a considerable amount of prostration.

5 A. M.—Respirations are very labored, and the dyspnœa is excessive; circulation is bad, and the general appearance of the child is very poor. Temperature, 102·2° F.

5.40 A. M.—The second-sized tube was introduced, but was coughed up with a large amount of mucus; it was reintroduced, and the child became more quiet. Thirty minutes after the introduction of the tube the pulse was 144, full and strong, respirations were much easier, and there was very little muscular effort required during inspiration.

6 P. M.—During the day he has swallowed easily a small quantity of milk at a time, has slept quietly, and at times has been very bright and playful. The tube became clogged up, and he stopped breathing until the back of his throat was cleared of mucus by a cotton swab. This method of clearing the throat was resorted to frequently during the ensuing night, much to the relief of the child.

8th, 9 A. M.—The child has been steadily growing weaker since midnight, and now his respirations are rapid and shallow, and the circulation in the lips and fingers is bad. Temperature, 105·2° F. At times the respirations are dry and whistling, the same as heard in a tracheotomy-tube. The most of the time, however, the tube is filled with a varying amount of mucus. During the morning he swallowed a small amount of food; he did not suffer from any painful dyspnœa. At 2 P. M. he became unconscious, and died fifteen minutes later.

NOTE.—It appears as though there had been, since 6 P. M. of the 7th, a gradual increase in the tracheal and pulmonary lesions, for, while the heart responded promptly to stimulation, the respirations grew steadily worse from this time, and the temperature also rose, yet the tube permitted the child to breath with comfort, and there was no sign of any suffocation. Five hours after death the urine was drawn, and, on examination, was found to contain 60 per cent. of albumin, also a a number of granular and hyaline casts and spheroidal epithelial cells.

CASE IV.—Charles W., aged five months and a half. This was a case of catarrhal tracheitis and bronchitis, where the smallest tube was introduced to relieve the painful dyspnœa, amounting almost to suffocation. This afforded the child immediate relief, and the mother was spared the anguish of witnessing a death from suffocation, death occurring three hours later.

In reviewing my experience with the tubes I will state, for the benefit of those who contemplate using them, that their introduction is comparatively easy, and any one can introduce them without difficulty after practicing a few times on the cadaver. Their withdrawal during life is a more difficult procedure, and at first I was obliged to make several attempts before being successful. I found that I aided myself in withdrawing the tube by forcing the body of the larynx upward and backward by means of pressure on the thyroid cartilage with the thumb of the left hand. It certainly was a mistake on my part to leave the thread in the tube (Case I), as shown by the fact that the tube was swallowed. In watching the other cases closely I have not found anything to make me believe that the tube can be swallowed after it has been properly introduced and the thread has been removed.

There is no well-marked spasm of the glottis during the introduction of the tube, and little more force is required to insert the tube than is used in the introduction of urethral sounds.

The relief to the child is instantaneous, and there is no shock attending the operation such as occurs in tracheotomy. I have five times during the past eighteen months performed tracheotomy; two cases were in children under one year, two between one and two years, and one two and a half years of age. The result has always been fatal; four cases died (as shown by post-mortem examination) with severe complicating diseases; the oldest child choked to death from an extension of the disease into the bronchi, living two days and a half after the operation. In every case there was some shock, and in two it was very severe, and required active measures to keep the child from dying immediately after the operation.

I can not fully account for the sudden and complete stoppage of respiration as occurred in Cases II and III. That the tube was partly clogged up was apparent, but it did not appear as though it was occluded with membrane. I believe that the respirations at first became embarrassed by an excess of secretion in the tube; then the tongue fell back, forcing the epiglottis over the fenestra of the tube. This belief is strengthened by the fact that the treatment which was resorted to afforded relief without the removal of the tube, for at each attack the tongue was depressed and forced forward in order to clear out the mucus from the back of the throat. It is highly probable that both the excess of secretion and the falling back of the tongue acted conjointly in causing the cessation of respiration. In another case I shall try first to see what will be the result of simply pulling the tongue out of the mouth before using any other means of relief.

On the whole, the relief afforded to my three cases of membranous croup, in which intubation was resorted to, was proportionately as great as it was in any of the five cases of tracheotomy; and I feel convinced that the latter operation would not have afforded them any better chances of recovery.

My feelings are in favor of the use of the tubes for the following reasons:

Intubation of the Larynx.	*Tracheotomy.*
The tubes produce no shock during their introduction.	Tracheotomy sometimes produces fatal shock.
They are instantaneously introduced.	It requires from ten to thirty minutes to open the trachea.
They are easily introduced.	It is oftentimes a very difficult operation, especially on a child of from four to six months of age.
They cause no wound.	It leaves an extensive wound, which is liable to infection from diphtheritic poison, erysipelas, etc.
They clean themselves.	It requires constant care and attention to keep the inner tube clean.
The inspired air is warm and moist.	Artificial means are necessary to make the inspired air warm and moist.
There is no increased risk of a complicating pneumonia.	The escape of blood or other fluids into the trachea increases the risk of a septic or lobular pneumonia.
There is no after-treatment.	The wound requires to be treated after the removal of the tube.

Added to these reasons, which are purely of a surgical nature, this method of treatment will be more favorably looked upon by the laity, who are always adverse to any operation, particularly when the patient is a young child. Again, the use of the tubes does not militate against the performance of tracheotomy, if the physician should deem it advisable.

The fact that the tube can be so easily coughed up is a sufficient answer to the one objection which I have heard raised—namely, that the tube may become plugged up with membrane.

Since writing the foregoing article, I have had another case of intubation for diphtheritic croup, and I am pleased to be able to report a recovery. By way of remark I will add that, out of all the cases of membranous croup in which surgical relief was required, this is the first one which, during the past six years, has terminated successfully.

Case V.—Eva W., two years and three months old, of American parentage. A well-nourished but delicate-looking child. On June 26, 1886, she was attacked with diphtheria, the tonsils and pharynx being extensively invaded. On the third day the temperature reached 105·4° F. By July 4th the throat was clean, but the child had a suspicious, hollow cough, which grew worse, and by July 6th true membranous croup had developed. At midnight the dyspnœa was severe, but was relieved by the child's vomiting. Dyspnœa returned in the morning, when there was recession of the chest-wall to a marked degree. At 10.04 A. M. a tube was introduced, but it was coughed up in a minute; it was cleansed and reintroduced, the operation being all over by 10.09 A. M. Dyspnœa was relieved. The child coughed spasmodically for half an hour, and was finally relieved by sucking large pieces of ice.

At 3 P. M. she was distressed with the same spasmodic cough for forty minutes.

6 P. M.—Temperature, 105°; respirations free and easy.

10 P. M.—Respirations, 58.

July 8th.—Restless for the first part of the night. Drinking excites a slight spasm, but not so much as yesterday. Sleeping all day. The urine was examined and found to be strongly acid. Albumin five per cent. Excess of urates and uric acid. Two or three mucous but no renal casts. Respirations, 39; temperature, 102·6°.

9th.—Not feeding well. Nutritive enemas given every two hours, together with stimulants. Respirations, 40; temperature ranged between 101·6° and 99·8° F. Vomited several times a large quantity of mucus. Has a loose cough which at times is a little croupy.

10th and 11th.—She vomited several times. She has had no dyspnœa since the introduction of the tube. At 5.40 P. M. she coughed very hard and was nearly strangling. The nurse saw the head of the tube in the throat and immediately pulled it out with her finger. The child vomited and was very much relieved. Respirations, 40; rhythm normal.

12th.—Slept all last night. Coughs a little, short, soft cough.

18th.—Slight cough still remains, which on examination was found to be due to a bronchitis of the larger tubes. Temperature almost normal. She was removed from the hospital to-day.

Note.—After the introduction of the tube, the physician's attendance was only required in directing the treatment and nursing of the case; as it so happened, the removal of the tube did not require his presence. If many more such easy recoveries can be reported in detail, for the future I think that intubation of the larynx will be substituted for tracheotomy in the treatment of membranous croup.

CLINICAL OBSERVATIONS IN OPHTHALMIC AND AURAL PRACTICE.

By C. H. BEARD, M. D.,

BRIDGEPORT, CONN.

Case I. *Chronic Suppuration of the Middle Ear; Secondary Phlebitis of the Cerebral Sinuses; Death.*—Porter I., a lad of eleven years, when at the age of three had a fall, after which his right ear had discharged for a time. He sought treatment of Dr. Wilson, August 22, 1882, at which time a second attack of suppurating middle-ear trouble of the right side had lasted for six months. The membrana tympani had been partially destroyed and the tympanic cavity had filled with a luxuriant crop of granulations. Under Dr. Wilson's efficient care the disease had been apparently subdued by the early spring of 1883. In the mean time an acute inflammation of the left middle ear had supervened, which, by vigorous and timely application of leeches and hot water, had been relieved without suppuration — at any rate, without perforation of the drum membrane. There had been recurrences of otorrhœa on the right side in the months of February and November (1884) respectively. In January, 1886, the ear had again been reported quiet—the hearing always remaining greatly impaired. Such is the fluctuating history of the boy's aural standing previous to his coming to me for treatment on May 27th last, shortly after my assuming charge of Dr. Wilson's practice. There was then a scant, brownish, highly fœtid discharge from the right tympanum, with a perforation involving probably one fifth of the drum membrane—though there were no signs of inflammation in the latter, nor were there any visible granulations. There was also slight pain in the head, but no mastoid tenderness. I syringed the ear with warm water, dried the canal, insufflated powder of boric acid, and requested the patient to call again after two days. Instead, however, of returning at the time specified, he went off on a visit to the country, and I saw no more of him until the 7th of June—nearly eleven days having elapsed. The conditions had become aggravated. There was pain referred both to the right ear and to the corresponding side of the head. The discharge was very slight. The membrana tympani was red and so swollen that the perforation was hidden. After Politzer's air-douche had been used, pus was seen to have welled up, nearly filling the tympanum, and a paracentesis was necessary before the ear could be properly cleansed. I again insufflated boric-acid powder, and ordered syringing of the ear with hot water at home. The following day (June 8th), the pain continuing and there being slight tenderness behind the auricle, I told the mother, who came with the patient, to apply leeches in addition to warm douches—she having already used them in acute otitis media of the opposite side—and to return the next morning.

June 9th.—I heard nothing of the patient till 8 p. m., when his mother brought him to my office. There was marked mastoid swelling. The boy had objected to leeches and they were not applied. The canal had been syringed at intervals with hot water. Realizing that Wilde's incision had better be made, I gave the mother instructions for active poulticing of the affected region with flax-seed meal till I should call next day, giving her to understand that an operation was indicated.

10th.—I went to perform the operation, Dr. H. Blodget kindly accompanying, to give ether, but the child's mother would not take the responsibility of consenting to the proceeding in the absence of the father. The latter was expected home, and we could only advise a continuance of the poultices. There was now distinct fluctuation over the mastoid.

11th.—Mr. I. came to my office and consented to the operation on his son. Again I went with Dr. Blodget and, under ether, with antiseptic precautions, made a free incision down to the bone. A quantity of stinking pus escaped. The surface of the bone was decidedly roughened. A delicate probe would not enter the mastoid cells, but passed readily beneath the integument into the middle ear. The operation was done at 4 o'clock p. m. Meantime the boy had had a chill.

12th.—He had a chill at midnight, followed by high fever and profuse sweating. The ear and wound were cleansed and fresh dressings put on.

13th.—The patient was more comfortable, though he shook again at midnight, and the temperature rose to 104° F. He had also been vomiting. There was very slight protrusion of the left eyeball, also an indurated swelling extending down the left side of the neck in the region of the internal jugular vein, causing the head to incline toward the right.

Diagnosis.—Septic phlebitis originating in the cerebral sinuses. I cleansed the ear, which discharged freely enough, dressed the wound, and prescribed quinin. sulph., gr. iv; hydrarg. cum creta, gr. iij; and pulv. ipecac., gr. ½—a dose every four hours.

14th.—I saw the patient with Dr. Young and Dr. Blodget. His condition was unchanged, except that there was a perceptible divergence of the left eye, and he said he saw double. There was another midnight rigor, with a temperature of 104·5°. The same treatment was continued.

15th.—There was commencing exophthalmos on the right side. He had shivering last night at 12.30 and a fever of 105°. Induration down the left side of the neck was extensive, and the parts involved were very sore. The prescription of the 13th was discontinued, and brandy and milk alone were used.

16th. — Exophthalmos was considerable on both sides. Changes in temperature were more frequent.

17th.—The patient was much weaker. There was great soreness of the neck on moving, with still greater protrusion of the eyes and extensive œdema of the conjunctival membranes. Iced cloths were applied to the eyes. At midnight death occurred.

An autopsy was not obtained, though the principal symptoms seemed to point to septic phlebitis and thrombosis. Consciousness was maintained throughout. The size of the pupils remained normal and uniform. The direction of the eyes was affected only by pressure from the implicated ophthalmic veins—*i. e.*, there was divergence. The ophthalmoscopic appearances were found to be normal on the last day but one. There was no evidence of disturbed function in the seventh nerve. That which gave a unique phase to the case was the appearance of symptoms relative to morbid processes in the sinuses, *first on the side opposite the exciting ear.* How is this best explained?

It was ascertained about the time of the boy's death that he had had a chill while in the country.

Case II. *Sympathetic Ophthalmic Irritation; Enucleation; Recovery.*—Miss Lizzie L., aged twenty-five, a native of Scotland, a compositor, came for consultation July 3, 1886. More than twelve years previous, in plucking a twig from a bush, a branch had rebounded forcibly and had struck the left eye. Severe inflammation had ensued, which had been treated, according to her statement, with *caustics* and *leeches*, the latter *applied to the lids*, and it had been two or three months before the eye became quiet. Entire loss of sight and partial atrophy of the globe had been the result. At the time of her first visit, on the above-mentioned date, the right eye had been more or less troublesome for a week. There were photophobia, excessive lacrymation, and considerable injection—$V=\frac{20}{50}$; no improvement with glasses. The pupil was rather large, but the patient said it was naturally so. The ophthalmoscope revealed nothing abnormal beyond very slight haziness of the vitreous humor. The tension of the globe was evidently somewhat raised, and pressure upon the organ gave rise to pain. The left eyeball was also red and watery. A diagnosis of sympathetic irritation was made, and immediate excision of the exciting eye was advised. Accordingly, on the afternoon of the same day, and again with the assistance of Dr. Blodget, the operation was performed. There was evident improvement in the condition of the right eye the next day, and, by the simple treatment of occasionally bathing it with warm water, complete recovery followed within eight days. The empty socket was kept clean and dressed for several days with vaseline, absorbent cotton, and a patch. At the end of two weeks the patient called at the office; she was on the eve of sailing for her mother country, and was happy in the possession of a perfectly sound right eye and a perfectly fitting artificial left eye.

On dissection of the enucleated eyeball, the following conditions were observed: The sclerotic was unnaturally thick and resisting, and within, in addition to the atrophic choroid, completely detached retina, hydrops subretinalis, etc., there were two stony plates—the one having its center coincident with that of the degenerated crystalline, and its periphery near the ciliary muscle; the other, just within the choroid, encircling the optic-nerve entrance and extending forward almost to the ora serrata. Examined more minutely (microscopically), these plates or shells proved to be of an osseo-calcific nature, the osseous element, however, bearing but a small proportion to the calcareous. There were unmistakable signs of hyperæmia in certain portions of the ciliary body, while the optic nerve itself, so far as it could be scrutinized, exhibited no evidence of recent irritation. There was nothing to indicate that a foreign body had been left in the eye after the injury.

This case I have deemed worthy of reporting for two reasons—viz., the unusual, though by means unprecedented, interval between the original injury and the threatening sympathetic disturbance, and the atom of evidence it may possibly furnish by way of settling a much-mooted question. Did the damaged eye affect its fellow through the medium of the ciliary nerves—by the blighting vaso-motor reflexes—or by morbid elements finding their way around through the intervaginal spaces? The writer has been tempted to theorize in this wise: The perverted nutritive forces of the eye were allowed to go on year after year in the building of these hard, useless walls, till, with the purpose of uniting them to form one firm capsule, their work encroached upon the domain of the recalcitrant ciliary nerves. Then there was trouble. The very foundation of one section was laid around the papilla.

DIOPTRY OR DIOPTRIC?

By H. KNAPP, M. D.

The controversy between Dr. S. M. Burnett and Dr. E. G. Loring will, I hope, lead to the general adoption of one or other of these terms, and thus end the unpleasant confusion. The question is, Which shall it be? In former years linguistic disputes were decided by the sovereign, as is illustrated by the following famous example: Louis XIV, at one of his soirées, happened to say "*Mon carosse.*" One of the court littérateurs was bold enough to remark that the word *carosse* was feminine. The king, not willing to admit that he had made a mistake, authoritatively replied: "*Je veux que carosse soit masculin!*" and since that time it is masculine. To learn whether it is proper to say *dioptry* or *dioptric,* we shall have to appeal to her Royal Majesty, for the language we speak is "the Queen's English." Until she has given her decision, the endeavor to come to an understanding need not be looked upon as a lack of loyalty. As far as grammatical analogy goes, the word dioptric seems to be as good as dioptry. To Dr. Loring's list of words ending in *ic* being used as nouns and as adjectives, I beg to add another taken from a branch of science kindred to optics. One of the most admirable researches of Helmholtz resulted in the demonstration that the quality of sound called *timbre* in French, *Klangfarbe* in German, timbre, clang-tint, sound-color in English, depends on the combination of a fundamental tone with a number of "over-tones." These over-tones are now generally called "*harmonics.*" One harmonic, for instance, is the octave of the fundamental tone. In the same way we might call the unit of refraction a *dioptric.* Unfortunately, the plural of this word has been used from time immemorial to designate the *science* of refraction. If we now designate the unit of refraction by the word dioptric, the plural of this word will have a double meaning which it is desirable to avoid, even though it cause no ambiguity. The names of certain sciences, as Dr. Loring recalls to mind, end in *y,* others in *ics.* The science of refraction *might* be called dioptry, but, since it *is* called dioptrics, it would be preferable, I should think, to designate the new acquisition by a different word. The scientific musician has long studied *harmony;* of late he has become acquainted with the *harmonics* (not the harmonies) of a tone. Conversely, the oculist who has long studied *dioptrics* has of late been invited to express the degrees of ametropia by *dioptries* (not by dioptrics). I say he has been invited, for the oculists of continental Europe, who, several years ago, thought it convenient for practical purposes to choose the refractive power of a lens of one metre focal distance as a unit, unanimously called this unit a *dioptry.* In my opinion there was then, and there is now, no reason why English-speaking people should not adopt this term and thus make it international. In spite of all this, I am just as willing as Dr. Loring is to adopt any word upon which the majority will agree, for language is convention.

The New York College of Veterinary Surgeons.—The introductory lecture to the students was given on Thursday evening, by Professor G. A. Lyons.

A Reception to Dr. Shakespeare.—Last Wednesday evening a reception, under the direction of a committee consisting of Dr. D. Hayes Agnew, Dr. R. J. Levis, Dr. J. M. Da Costa, Dr. William Pepper, Dr. S. W. Gross, Dr. I. Minis Hays, Dr. William Osler, and Dr. M. S. French, was given at the Hotel Bellevue, in Philadelphia, to Dr. Edward O. Shakespeare, on the occasion of his return from official medical service in Europe and Asia.

The late Professor Pirogoff.—The "St. Petersburger medicinische Wochenschrift" announces that the great Russian surgeon's widow has built a church over his grave, and that there is a school near by, established with the funds contributed at the time of the Pirogoff jubilee in Moscow.

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THE PROPOSED CONFEDERATION OF SPECIAL SOCIETIES.

The conference committees appointed by the various special societies to consider a plan for the partial confederation of those bodies have certainly lost no time in getting to work. On Friday of last week, the day after the adjournment of the meeting of the American Gynæcological Society, which was the last of the societies concerned to hold its annual meeting, the committees of conference came together in Washington, and, as is related elsewhere in this issue, proceeded at once to organize as a body, choosing for the chairman a gentleman as well known for his admirable presiding qualities as for his professional and social eminence, and for the secretary one who, as the editor of the "Transactions of the American Surgical Association," has shown himself conspicuously qualified for the varied and taxing work that always falls to a secretary's lot. When it is added that so accomplished and clear-headed an organizer as Dr. Pepper presented the resolution setting forth an outline of the plan for the working of the proposed confederation, it will be seen that the associated committees began their task under the most favorable circumstances. The meeting was successful also from another point of view, that of being attended by a very large proportion—nearly half—of the persons accredited to it. Each of the nine special societies had appointed a committee of five, and the whole number included eight gentlemen from New England, nineteen from the Middle States, nine from the South (including Maryland and the District of Columbia), eight from the West, and one from Canada. This was a representative delegation from the geographical point of view—a consideration that, however irrelevant to purely scientific proceedings, should be taken into account in the matter of organization. Counting two Philadelphia gentlemen who attended as substitutes, nineteen of the forty-five committeemen took part in the meeting—five from New England, six from the Middle States, seven from the South, and one from the West. But it was not from that standpoint alone that the list of committeemen was a strong one; it was remarkebly representative of the best elements in the profession, irrespective of locality.

As for the plan proposed in Dr. Pepper's resolution and the amendments that were accepted and passed, it is, of course, to be taken only as an outline, the details and even the main features being subject to further action. The first thing to be said of it is that it frankly and explicitly disavows any intention of trenching in the slightest degree upon the autonomy of the individual societies. This ought to allay the slight apprehension that has been felt on that score. The provision for a conjoint meeting only once in three years, and that for allowing each body in turn to name the presiding officer, seem to us exceedingly judicious. We think, however, that, instead of two evenings being devoted to the conjoint meeting, one would be ample, and we would have the proceedings limited to a presidential address and such purely business matters as may be unavoidable. It is questionable whether it would even be well for a discussion to follow the address. Our decided impression is that it would not. The address is pretty sure to be worth listening to in almost every instance; any discussion called out by it would necessarily be hurried and crude. As for that tender plant the "referee" and "co-referee" scheme (whatever those particular examples of pigeon English may be alleged to mean), would it not be well to wait and see how it flourishes in the Association of American Physicians and Pathologists, to which it seems to be indigenous, rather than hastily transplant it to a composite and more or less foreign soil?

THE MEDICAL SERVICE OF THE NEW YORK STATE MILITIA.

The Annual Report of the Surgeon-General of the State of New York, which has just been published in the form of an appendix to the Report of the Adjutant General, gives fresh proof of the zeal and intelligence brought to bear by Surgeon-General Bryant upon the sanitary care of the National Guard. It is supplemented by interesting reports by various regimental medical officers, including those of Surgeon E. A. Lewis, of the Twenty-third, Surgeon Daniel M. Stimson, of the Seventh, Surgeon Stephen W. Roof, of the Ninth, Surgeon E. T. T. Marsh, of the Seventy-first, Surgeon Charles E. De la Vergne, of the Thirteenth, Surgeon Edward H. Ashwin, of the Forty-seventh, and Surgeon W. T. Duncan, of the Twenty-second.

Much of the interest of these documents relates to the annual encampment of the National Guard at Peekskill. It seems that heretofore it has been customary for the surgeon-general to attend personally to the ordering and selection of the medical and surgical supplies for the camp; but, with the view of testing the present efficiency of the regimental surgeons, to increase their sense of responsibility, and to make them more thoughtful and self-reliant, the plan was adopted this summer of ordering them to prepare requisitions for such medical and surgical supplies as, in their opinion, might be requisite, the lists being subjected to the surgeon-general's scrutiny. The procedure has been found in every way satisfactory, and General Bryant expresses his conviction that it ought to be carried out every year. It is curious to note that the surgeon-general reports that, if any of the medical officers were open to criticism on account of carelessness or apparent indifference to official directions from his office, it related alone to the proper making out and forwarding of the final reports relating to the encampment; and Dr. Bryant's ingenuity is made quite as obvious as his good-nature when he adds: "Still, this apparent indifference is due, not doubt, to the distraction of thought incident to a busy professional life, and also in many instances to the recognized tolerance which medical officers possess for each other by reason of the difficulty on their part of substituting the acts of an official martinet for those of professional gentlemen."

The report calls attention to the anomaly that apparently the State cares more for the horses of a battery than for the men of a separate company, for to every battery of four guns it allows a veterinary surgeon, while nearly half the separate companies are without authority to provide themselves with a suitable medical officer. He urges such changes in the code as may provide every separate company with a commissioned medical officer—a demand which every consideration of humanity certainly pleads for. Dr. Bryant raises a warning voice concerning the danger of the present practice of allowing the soil beneath the kitchen and wash-room adjacent to the mess-hall to become saturated with slops, like "a large sponge filled with decomposing organic matters that only require a good stirring in a warm sun to assert their power for evil."

There are other points in the report on which we should be glad to touch, but we have only space to commend the broad and careful advice given to regimental surgeons as to their duties. If an opinion is not asked for, says Dr. Bryant, the medical officer should at all times suggest to the commanding officer the propriety of every practical measure for the relief of the men. He should, however, be conservative in his advice, remembering that an excess of zeal or an overwise and ostentatious performance of his duty is not infrequently more disastrous to the *morale* of a command than the danger sought to be averted.

MINOR PARAGRAPHS.

INFECTIOUS PLEURO-PNEUMONIA IN CHICAGO.

An impression wholly favorable to the sanitary authorities of the General Government, of the State of Illinois, and of the city of Chicago was made by the announcement last week that a collection of three thousand swill-fed cattle was to be sacrificed straightway, to prevent the spread of pleuro-pneumonia, to which they had been exposed. At present the public is not aware that such a radical measure has actually been carried out, and fears are entertained that the interests of the owners of the wretched animals will be deferred to to an extent that is likely to give rise to danger. It is to be hoped, therefore, that the authorities in question will not be found wanting in resolution to do whatever seems best for the general interest, regardless of the preferences of the owners of the cattle referred to.

THE DIPLOMA INDUSTRY IN GERMANY.

One Dr. Rumler, as we learn from the "Deutsche Medizinal-Zeitung," is the manager of a concern in Germany that advertises its ability to procure a doctorate by way of the back door ("Doctorpromotion durch Hinterthüren") in return for a sum of money. This ingenious person professes to be able to secure for his patrons a diploma from any university in Germany or Switzerland, and to furnish the thesis necessary for the degree in chemistry.

THE MEDICAL COLLEGE OF SOUTH CAROLINA.

We are glad to learn that members of the profession in this part of the country are responding promptly and liberally to the appeals made by Dr. Thomas and Dr. Sayre in behalf of the college and of individual Charleston physicians who have suffered in consequence of the earthquake. It is gratifying to see also, by Dr. Thomas's published acknowledgments, that the fund for these purposes is coming in part from persons who are not members of the medical profession. We trust that the college will speedily be enabled to put itself in the condition it was in before the disaster.

ITEMS, ETC.

Infectious Diseases in New York.—We are indebted to the Sanitary Bureau of the Fourth Division of the Health Department for the following statement of cases and deaths reported during the two weeks ending September 28, 1886:

DISEASES	Week ending Sept. 21.		Week ending Sept. 28.	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever	46	12	37	14
Scarlet fever	10	1	20	3
Cerebro-spinal meningitis	2	2	7	7
Measles	32	4	29	3
Diphtheria	45	18	40	18

The Death-rate of Boston.—During the month of August last there were 865 deaths, or 25·9 to every thousand inhabitants.

Yale Medical College.—On Sunday last a fire, that occurred in a second-story room, damaged the building to the extent of about $1,500.

The Proposed Confederation of Special Societies.—Committees of conference representing the American Ophthalmological Society, the American Otological Society, the American Gynæcological Society, the American Laryngological Association, the American Dermatological Association, the American Surgical Association, the American Neurological Association, the American Climatological Association, and the Association of American Physicians and Pathologists met in Washington on Friday of last week, and organized by the election of Dr. S. C. Busey, of Washington, chairman, and Dr. J. Ewing Mears, of Philadelphia, secretary. It was resolved that the bodies represented should vote by title, in chronological order, and as units. Dr. William Pepper, of Philadelphia, offered the following resolutions, which, after careful consideration and discussion by those present, were adopted separately, and then as a whole:

Resolved, 1. That it is desirable that the following societies —the American Surgical Association, the American Ophthalmological Society, the American Otological Society, the American Neurological Association, the American Laryngological Association, the American Gynæcological Society, the American Dermatological Association, the American Climatological Association, and the Association of American Physicians and Pathologists—shall arrange for a conjoint meeting in the city of Washington, in the month of September, 1888, and subsequently at intervals of three years, at the same time and place.

2. That this arrangement shall not interfere in any way with the autonomy of each special society; and that each society shall retain the right to withdraw at any time from this conjoint scheme.

3. That the special feature of the meeting shall be the conjoint assemblage of the special societies on two evenings during the session, on one of which there shall be an address delivered by the president of the conjoint meeting, and on the other there shall be communications by a referee [*sic*] and a co-referee [*sic*] on some subject of general professional interest.

4. That each special society approving this report is invited to appoint one representative (with an alternate), and that the representatives so appointed shall constitute an Executive Committee to serve for one year, with power to elect such officers for the first conjoint meeting as may be deemed necessary; to pre-

pare a programme for said meeting; to make all other necessary arrangements; and to prepare and submit a plan of organization for future meetings.

5. That all expenses connected with the conjoint sessions shall be apportioned equally by the Executive Committee among the special societies participating.

Owing to the views entertained by the committees of the Ophthalmological Society and the Dermatological Association, with regard to the intervals of times of the meetings, they abstained from voting upon the first resolution.

Army Intelligence.—*Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from September 19, 1886, to September 25, 1886:*

FISHER, W. W. A., First Lieutenant and Assistant Surgeon. Granted leave of absence for one month, to take effect September 10th, with permission to apply for one month's extension. S. O. 88, Department of Arizona, September 1, 1886.

GANDY, CHARLES M., First Lieutenant and Assistant Surgeon. Assigned to duty at Fort Concho, Texas. S. O. 131, Department of Texas, September 18, 1886.

Marine-Hospital Service.—*Official List of Changes of Stations and Duties of Medical Officers of the United States Marine-Hospital Service, for the week ended September 25, 1886:*

BAILHACHE, P. H., Surgeon. Granted leave of absence for thirty days. September 25, 1886.

VANSANT, JOHN, Surgeon. Granted leave of absence for thirty days. September 24, 1886.

BRATTON, W. D., Assistant Surgeon. Relieved from duty on Revenue Steamer Corwin, ordered to duty at Marine Hospital, San Francisco, Cal. September 20, 1886.

Society Meetings for the Coming Week:

MONDAY, *October 4th:* New York Academy of Sciences (Section in Biology); Medico-chirurgical Society of German Physicians; Morrisania Medical Society (private); Utica, N. Y., Medical Library Association; Boston Society for Medical Observation; St. Albans, Vt., Medical Association; Providence, R. I., Medical Association; Hartford, Conn., City Medical Association; Chicago Medical Society; Medical Society of Monmouth County, N. J. (Freehold).

TUESDAY, *October 5th:* New York Obstetrical Society (private); New York Neurological Society; Elmira, N. Y., Academy of Medicine; Buffalo, N. Y., Medical and Surgical Association; Ogdensburg, N. Y., Medical Association; Medical Societies of the Counties of Broome (annual), Columbia (annual—Hudson), Orange (semi-annual—Goshen), and Schoharie (semi-annual), N. Y.; Medical Association of Northern New York (annual—Malone); Medical Societies of Hudson (Jersey City) and Union (quarterly) Counties, N. J.; Androscoggin, Me., County Medical Association (Lewiston); Chittenden, Vt., County Medical Society.

WEDNESDAY, *October 6th:* Harlem Medical Association of the City of New York; Medical Society of the County of Richmond, N. Y. (Stapleton); Penobscot, Me., County Medical Society (Bangor); Bridgeport, Conn., Medical Association; Philadelphia County Medical Society (regular).

THURSDAY, *October 7th:* New York Academy of Medicine; Society of Physicians of the Village of Canandaigua, N. Y.; Boston Medico-psychological Association; Obstetrical Society of Philadelphia; United States Naval Medical Society (Washington, D. C.); Washington, Vt., County Medical Society.

FRIDAY, *October 8th:* New York Academy of Medicine (Section in Neurology); Yorkville Medical Association (private); Medical Society of the Town of Saugerties, N. Y. (anniversary).

SATURDAY, *October 9th:* Obstetrical Society of Boston (private); Worcester, Mass., North District Medical Society.

OBITUARY NOTES.

John S. Emerson, M. D., of Lynn, Mass., died suddenly on Thursday, September 23d, at the age of fifty-four. He was born in Chester, N. H., and was graduated from Harvard Medical School in 1855. During the civil war he served as surgeon in the Ninth and Eighteenth New Hampshire regiments. He was a member of the Massachusetts Medical Society and of the Essex, Mass., South District Medical Society, and senior surgeon of the Lynn Hospital.

Dr. Lewis H. White, an aged practitioner of Fishkill, N. Y., died on Friday of last week. The deceased was a licentiate of the Medical Society of the County of Westchester, his license having been issued to him in 1828.

Colonel John F. Hammond, M. D., of the Army (retired list), died at Poughkeepsie on Wednesday, the 29th inst. He was a native of South Carolina, and entered the army as Assistant Surgeon in 1847, attained the rank of Colonel and Surgeon in 1882, and was retired January 9, 1885.

Letters to the Editor.

THE DIOPTRY AGAIN.

1734 K STREET, WASHINGTON, D. C., *September 27, 1886.*

To the Editor of the New York Medical Journal:

SIR: The readers of this journal have, no doubt, had as much of the "dioptry" discussion as they care for, and, so far as I am concerned, the matter may now rest on its merits. But, before leaving it finally, there are some statements made in Dr. Loring's paper, in the number for September 25th, which I think should not be allowed to go by unnoticed and uncontroverted. The spelling of a word in the English language, where so much liberty in such matters is allowed, is a small affair, but fairness and justness are by no means insignificant things, and in their cause I wish to add yet a few words.

Dr. Loring cites a number of words ending in *ic* which he calls substantives, and, in the common parlance of the street and shop, they do perform the functions of nouns, but yet they are simply adjectives with the noun understood. When we speak of a "tonic," we mean a "tonic medicine" or remedy; of an "epidemic," we mean an epidemic disease. Of the formation of such so-called nouns (and of verbs from nouns, for that matter) there is no end, each day, almost, bringing forth its contingent. We read and speak of "sphericals" and "cylindricals" (one writer I know of even going so far as to use "spheric" and "cylindric"); and yet there is no warrant for them by law or good usage. Shall we, then, because there exists in our nomenclature a lot of words which have got into it in this slipshod kind of way, foist another upon a long-suffering public? To avoid confusion and conduce to accuracy, the adjective and the noun should have different terminations; and I believe ours is the only language which tolerates this double use to any considerable extent, and I do not think that this leniency is counted among its virtues.

Another objection to "dioptre" is that it has been already pre-empted by the French for another use. Robin, in his recent "Dictionnaire de médecine," says it means a *speculum.*

I do not want to think that Dr. Loring would knowingly misrepresent me, and yet, when he says that "I frankly confess that I do not understand what Dr. Burnett means when he says, 'A metre-lens is one having a focus of one metre, and this entirely independent of its radius of curvature and index of refraction,' I cannot imagine any system of lenses, metric or other, independent of radius of curvature or index of refraction," he must mean to imply, if he means anything, that I consider that the metre-lens has neither radius of curvature nor index of refraction.

It would seem that my capacity to appreciate (as I believe I do) the excellent optical appendix which Dr. Loring has given in his text-book, which is the foundation of this discussion, and the fact that I have spoken of it in the highest praise whenever an opportunity has offered, have not been sufficient to protect me from such an insinuation of ignorance and stupidity. If Dr. Loring had read the rest of the paragraph of which the sentence quoted is the beginning, he would have discovered, I think, exactly what I mean, and would have found also a complete refutation of the whole of his argument on that point; and to this paragraph I would refer any reader who cares to know what I meant by that sentence, and, if he is of average intelligence, I think he will have no difficulty in finding out.

The chief point I made against Dr. Loring in the first instance was that he had not used the English inch as his standard, and the sublimity of my patriotism is duly recognized because I do not accept with him the French inch, and put my written *e*'s in the place where they will have the sound we give them in our speech. This is, after all, in a certain measure, a matter of taste, and, if Dr. Loring chooses, he can adopt for his writings the French inch, but I think we who read his book have a right to expect from him that courtesy to the standard inch of his native land (we have supposed him to be an American) which has been accorded it by most foreign writers—at least a mere mention that there *are* such things as an English inch and its equivalent in dioptric values. Dr. Loring wants to know "who the manufacturing opticians are that furnish glasses ground to the English inch on oculists' and physicians' orders." I have before me a book of prescription-blanks upon the house of Meyrowitz Brothers, New York, and on the inside of the cover are printed these words: "*All* trial-cases are numbered in *English* inches, and consequently 40 is nearer 1 D than 36." The Italics are theirs. I have a similar book of blanks from Meyer's Sons, New York, with the same statement, and the "Geneva Optical Co." wrote me that their lenses are ground to the English inch, but that the French can be used if ordered. The extensive manufacturing company of Queen & Co., of Philadelphia, say in one of their circulars: "In the new or metric system of numbering spectacles and test-lenses the unit is the dioptry (written also dioptre and dioptric, and abbreviated D), which is a lens having a focal distance of 1 metre = 39·37 English or American inches = 36·96 Paris or French inches." And they state, further, that they "are prepared to furnish lenses accurately ground according to either the dioptric or inch system." And, as these firms have furnished a large number of trial-cases to the physicians of the United States for several years, Dr. Loring may be even now knowing—unconsciously—"an oculist or practicing physician in this country who uses a test-case the glasses of which are ground to the English inch." It is all right and proper that Donders or other Netherlandish writers should use the French inch, because it is the inch with which their men of science are familiar, as their men of culture are with the French tongue, in which language, indeed, a large part of their scientific contributions are printed; but Dr. Loring would hardly expect a communication in French sent to any of our prominent medical journals to be printed and generally read. If he wishes to reach the profession in this country he writes in English. Moreover, Donders did not write his book in English. It was written in Dutch, and translated into English by Dr. Moore, as stated on the title-page.

But, after all, this is not a personal matter, but one wholly of scientific interest. Dr. Loring has the very laudable desire to strip ophthalmoscopy and refraction of all useless technicalities, and thinks much may be done toward this end by the "assumption, which is near enough for all practical purposes, that the focal length of a biconvex or biconcave lens is equal to the radius of curvature upon which it is ground." A man who knows that and no more does not need to know that much. Say nothing about radius of curvature, and simply tell him that the focus of a lens is the point of union of parallel rays after refraction. The metric system does this, and, if properly used, will go far toward the establishment of that simplicity which Dr. Loring and all the rest of us want, for the benefit of the student.

In conclusion, to "settle the matter at once" and close the discussion on Dr. Loring's own proposition, I will "cite the names of such scholars [and ophthalmologists] as say 'dioptric' is not a scholarly word, or, better still, that it is not so scholarly as 'dioptry.'" Dr. Noyes, of New York, uses "dioptry" in his text-book on the eye, published by Wood & Co. Dr. Knapp, of New York, uses "dioptry," and it is the only form of spelling used in the "Archives of Ophthalmology." Dr. Alt, editor of the "American Journal of Ophthalmology," uses only "dioptry." Dr. Schell, of Philadelphia, in his treatise on the eye, gives preference to "dioptry." Dr. Mittendorf is the only one of Dr. Loring's colleagues in New York, so far as I am at present aware (though there may be some others), who uses "dioptric," and even he may have "reformed" in this particular since the publication of his text-book in 1881.

And, finally, Dr. Landolt, than whom Dr. Loring, for his part, desires no higher authority, in his late work on refraction and accommodation, the translation of which, into English, was made under his own supervision, uses "dioptry" as the English equivalent for "dioptric." After a Frenchman has said that "dioptry" is the proper English word, is there anything left for us to do but to accept it?

For my own part, I am willing to leave the whole question to the American Ophthalmological Society, and I hope some one will bring it to the notice of the society at its next meeting; and, should it arrive at anything like a unanimous conclusion, I am willing to abide by it, whatever it may be.

I am, sir, yours very truly,

Swan M. Burnett.

THE SOCIAL EVIL.

New York, *September 23, 1886.*

To the Editor of the New York Medical Journal:

Sir: The objections to the views of Dr. McLaury so ably advanced by Dr. Ferd. C. Valentine in your issue of September 18th are practically identical with those which were made during the ensuing discussion in the body of the society. I thoroughly agree with Dr. Valentine in the matter, and so expressed myself, together with Mr. W. H. Russell, formerly of St. Louis, and who was therefore in a position to cite the experience of that city regarding the regulation of prostitution. The entire discussion is being published, if it is not already in type.

Yours respectfully,

E. C. Spitzka.

THE TEMPORARY TREATMENT OF BURNS.

79 East Fifty-sixth Street, New York, *September 25, 1886.*

To the Editor of the New York Medical Journal:

Sir: I desire, through your valuable journal, to call the attention of surgeons attached to hospitals into which patients are admitted who have received severe burns to a most simple and effective method of temporary treatment, by which delay during shock is avoided, and hurried and painful dressings are done away with.

I smoothly and evenly spread a very light layer of vaseline on one side of a soft muslin sheet, five feet in width by seven feet in length. Two or three such sheets, when properly folded, will occupy a very small space, and can be carried, ready for use, in an oiled-silk bag. They are particularly adapted to the treatment of patients in ambulance practice, and are to be used as follows: The stretcher having been placed at the patient's side, the heavy blanket with which all ambulances are provided is laid over this, and the prepared sheet unfolded and evenly spread out upon the blanket. The patient, after having received a narcotic and a stimulant, is gently placed upon the stretcher, and the sheet and blanket are folded over him. Should the face be burned, a mask can be readily clipped off of the sheet with scissors.

A dressing of this kind requires but a few seconds for its application, is soft, soothing, and unirritating, being padded on all sides by the blanket, and can be left about the patient till reaction from shock has taken place, or a permanent dressing is to be applied at the hospital.

This dressing can be almost painlessly removed, and upon its removal the burned surfaces will be found to be in a suitable condition for the reception of any permanent dressing the surgeon may desire to apply. When interne in Bellevue Hospital, I introduced this method of temporary treatment, and its introduction has been followed by very gratifying results.

Heretofore it has been the custom in ambulance practice to freely smear the burned surfaces with vaseline, or bathe them with carron-oil, and then to apply a roller bandage impregnated with some oily substance. This dressing is difficult and tedious to apply, and causes considerable delay and suffering at a time when these drawbacks to recovery should be positively avoided. Upon its removal, which is also accompanied by pain and difficulty, the injured parts are found to be in an unfit condition for the reception of cleanly dressings or scientific treatment.

Charles F. Stokes, M. D.

Proceedings of Societies.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Meeting of September 27, 1886.

The President, Dr. Daniel Lewis, in the Chair.

Officers and delegates to the State Medical Society having been nominated, the meeting listened to the reading of the memoirs that constituted the special order.

A Memoir of S. Oakley Vander Poel, M. D., LL. D., was read by Dr. Cornelius R. Agnew. Although Dr. Vander Poel's connection with the society had been limited to four years, it was true here, as in the other fields of his usefulness, that he moved faithfully, honestly, and without interruption to the front, and he had therefore been chosen to be president at a critical juncture of the society's affairs. After reciting the principal events of Dr. Vander Poel's life, the author said: "By education and temperament he was made averse to every unnecessary attempt to compel the reception of the truth by its subjects. He was firmly grounded in the truth himself, being under the sway of a high standard of morals, and led on in his own career by a high ideal. He was tolerant of dissent. . . . In the work of the Charity Organization Society he took a lively interest. In the New York Academy of Medicine, in the Medical and Surgical Society, he was respected and trusted. In the home, in the church, in his profession, in the State, in the relations of friend and acquaintance, he was ingenuous and loyal. . . . While in life he never professed to be faultless. For any good he did he was quickly ready to give all the glory to his divine law-giver, friend, and guide."

An Account of the last Illness of Thomas Alexander McBride, M. D., was read by Dr. D. B. St. John Roosa. [See page 365.]

A Memoir of Austin Flint, M. D., LL. D., was read by Dr. W. M. Carpenter. The following quotations from the memoir refer to Dr. Flint's private character: "On one occasion he said to the author: 'It is a positive enjoyment for me to write, and when the work of the day is done I sit in my office and frequently write until 11, 12, 1, and perhaps 2 o'clock before I feel tired enough to go to bed.' The result of this labor, yet his pleasure, was the numerous articles for medical journals, papers to be read before medical societies, addresses before learned and scientific bodies, and several volumes on subjects belonging directly to our science and art, all of which reflected credit upon their author. He wrote with facility, his style was finished, and his diction was classical. . . . He won the respect, the confidence, and the admiration of his pupils. His lectures were characterized by graceful delivery, simple but expressive language, and systematic presentation of his subject. . . . He rarely lectured or spoke on medical subjects without preparation. . . . Gentlemanly deportment was his constant attendant. Dr. Flint was a man of simple habits, polished manners, independent opinions, and freedom from fear in their advocacy, and indefatigable industry, of whom it can be said truthfully that 'he possessed a capacity equal to any occasion which might arise.' . . . He was affable and indulgent, and was always ready to throw around the beginning practitioner the strong arm of his protective power and sympathy."

AMERICAN GYNÆCOLOGICAL SOCIETY.

Eleventh Annual Meeting, held in Baltimore, Tuesday, Wednesday, and Thursday, September 21, 22, and 23, 1886.

The President, Dr. Thaddeus A. Reamy, of Cincinnati, in the Chair.

The Address of Welcome was made by Dr. H. P. C. Wilson, of Baltimore. In the name of the resident fellows, of the general profession and of the citizens of Baltimore, and in the name of her women, he extended to the society a hearty welcome.

Division of the Cervix Uteri backward in some Forms of Anteflexion of the Uterus, with Dysmenorrhœa and Sterility.—Dr. Wilson then read a paper with this title. This was an old operation, but, as a result of various causes, it had been barren of good results in certain hands, and followed by bad results in other hands. The use of stems, sponge-tents, and dilators had been substituted for it, but he had found no measure so safe and efficient as the knife in the classes of cases to which he should call attention. These were: 1. Those of anteflexion of the uterus, with an indurated cervix, where the body was bent upon the neck or the neck upon the body, forming a more or less acute angle. 2. Cases of acute flexion where the cervix was hyperplastic and indurated, as dense as cartilage. 3. Cases in which there was a hard, unyielding internal os, through which the probe passed with difficulty, and in its passage gave the sensation of passing over rough, dense cartilage, while the finger in the sulcus between the body and the neck in front felt the sensation of a strong cord tied around the uterus. If the patient escaped the secondary results which sometimes followed the use of tents, they were, next to the use of the knife, the most efficient means of overcoming the difficulty. Forcible dilatation did not restore the anteflexed uterus. For the purpose of rectifying the difficulty, the knife was the surest means in the cases referred to. Where the posterior lip of the cervix was divided, and the internal os divided anteriorly and posteriorly, the circular muscular fibers were paralyzed, and the longitudinal fibers contracted and tended to rectify the distortion. With the patient anæsthetized, the uterus was to be drawn downward with a tenaculum fixed in the anterior lip. The posterior lip was then to be divided with scissors up to the vaginal junction. A hysterotome was next passed, and the internal os divided anteriorly and posteriorly to an extent sufficient to permit of the introduction of a large sound. The parts were allowed to bleed freely. A pledget of cotton soaked in a mixture of Monsel's solution, tincture of iodine, and glycerin was then introduced into the cervix, and the vagina lightly tamponed. The tampon was not removed until the third day. All manipulation of the uterus was avoided for at least two weeks. The patient was allowed to recover fully from the operation, which usually required a month. All treatment was then suspended for a month, to allow the endometrium to improve. Intra-uterine applications of Churchill's tincture of iodine were then made two or three times a week. The treatment was again suspended after the lapse of a month, to be resumed in the course of one or two months. If this after-treatment was not carefully and properly carried out, the operation had better not be done. The author had performed the operation four hundred times, and had never produced such good results with any other method. No death had occurred which could be attributed directly to the operation.

Dr. T. A. Emmet, of New York, considered mechanical dysmenorrhœa a myth. There were two conditions of flexion: one a flexure of the neck, a congenital defect, and the other a flexure of the body of the uterus due to preceding inflammation outside the uterus. Sterility resulting from this latter cause was not relieved by the operation, and its performance was attended with great risk to life. The congenital flexion was the only one in which he operated to relieve sterility. There were a few cases of the inflammatory form of flexion where the operation benefited the reflex symptoms by its revulsive action. Where he had done the operation, he had drawn the vaginal mucous membrane to the bottom of the wound and secured it with stitches. This did away with the necessity of plugging and the danger of hæmorrhage.

Dr. James R. Chadwick, of Boston, had not been successful with this operation in curing sterility or dysmenorrhœa. He regarded the flexion as always congenital, the result of a persistence of the infantile shape of the uterus. The defect was not confined to the anatomy of the organ, but involved its function also, and probably extended to other portions of the genital tract. The only cases in which he had seen benefit from the operation had been where there was flexion with a small external os. In a certain proportion of these cases impregnation had followed. He thought the operation should be restricted to cases in which there was flexion with a small external os, but in which the uterus seemed to be well developed in other respects.

Dr. W. H. Baker, of Boston, said that, while the immediate results were very gratifying, yet in many cases they were not permanent. Of late years he had limited the operation to cases in which there was a congenital malformation and those in which there had been an inflammatory condition the results of which had been removed.

Dr. John Scott, of San Francisco, had practiced the operation, but, while the immediate results had been good, he had been disappointed in the ultimate results. He had gradually come to limit it to the cases described by previous speakers. After the operation, the patient should be confined to bed and hot-water injections be employed every two hours.

Dr. W. T. Howard, of Baltimore, had given all the operations alluded to a fair and full trial. His experience had not shown him that any particular operation was the one for all cases. By the antero-posterior incision he had produced some excellent results. With the precautions adopted in operating in other portions of the body, an incision of this kind should not be dangerous in the majority of cases. Dr. Mundé, in a paper on this subject, had reported over three thousand cases with only nine deaths. He thought that forcible divulsion was attended with as much risk as incision.

Another Modification of Emmet's Cervix Operation.—Dr. R. Stansbury Sutton, of Pittsburgh, Pa., read a paper embracing notes of a case of old-standing, neglected double laceration. The cervix was composed of dense hyperplastic tissue, almost cartilaginous in character. An operation by the ordinary method was out of the question, for the sutures would not have held. In order to remove the greatest amount of cicatricial tissue and overcome the condition, the following procedure was resorted to: The lower lip of the laceration was denuded of its altered mucous membrane, leaving only a narrow strip corresponding to half the strip usually left to serve for the future os. The upper lip was treated in the same way, leaving the opposite half of the strip of mucous membrane. When the flaps were brought together, the strips of mucous membrane lay side by side. In this way adhesion of the canal was prevented. Good union followed the operation, and at the end of three weeks a Simpson's sound was passed without difficulty. This operation might be of service in certain cases where the usual operation could not be performed.

Dr. Emmet considered the modification an ingenious one, but its value could be determined only by further trial. In cases, however, where there had been much cystic degeneration it was often better to amputate a portion of the cervix, so as to get down to healthier tissue.

Dr. George J. Engelmann, of St. Louis, had paid very little attention to the strip of mucous membrane, but, in such cases as had been described by Dr. Sutton, cut away nearly all the mucous membrane and inserted a short piece of fine catgut. This kept all the opening which was necessary.

Dr. Baker had been in the habit of removing a transverse wedge-shaped portion of each lip, and then bringing the parts together. In this way the hyperplastic tissue preventing the apposition of the surfaces was removed.

Notes on the Treatment of Recent Laceration of the Cervix Uteri was the title of a paper by Dr. Ellwood Wilson, of Philadelphia, read by the secretary. Occasionally a tear of the cervix could be recognized immediately after labor, but sometimes this could not be done. The patient should always be examined ten or twelve days later. If laceration was found immediately after labor, injections of a corrosive-sublimate solution (1 to 5,000), with the insertion of an iodoform suppository, should be resorted to. The vagina should be irrigated every other day, and the suppository renewed. When the laceration was found within three weeks after delivery, the following treatment should be employed: after the surface had been carefully cleansed and dried, it should be painted with a solution of nitrate of silver, one drachm to the ounce of distilled water. From three to five applications, at intervals of five days, were usually required. In every case in which the author had tried this measure (six in number) the result had been entirely satisfactory.

Dr. **Barker** thought the practice recommended in the paper well worthy of trial. It is much preferable to closing a laceration immediately after labor.

Dr. **Emmet** supposed that a certain amount of laceration occurred in every labor, but it was wonderful what nature would do to restore the cervix where septic poisoning was not present. It seemed that in all cases where, under favorable circumstances, nature had failed to repair the damage, there had been symptoms indicating septic inflammation. He believed that the same results would have been obtained, in the cases reported, even if nitrate of silver had not been employed.

Dr. **Scott** had in only one case attempted to sew up the cervix shortly after labor. In that case there was an extensive tear of the cervix and of the perinæum, with considerable bleeding, and five hours after labor he thought it advisable to sew up the cervix. The tissues were so soft that it was with the greatest difficulty he could get the sutures to hold. Union took place, however, both in the cervix and in the perinæum.

Pelvic Inflammations; Cellulitis versus Peritonitis.—Dr. **Emmet**, in a paper with this title, said that in this country the term cellulitis had come to signify pelvic inflammation without reference to the special form, but its origin was supposed to have been in the connective tissue. So close was the relation between the connective tissue and the peritonæum that it seemed impossible for inflammation to be present in one without affecting the other. There were situations, however, as between the uterus and bladder, and between the uterus and rectum, where cellulitis might exist without involving the peritonæum. Inflammation in these situations tended to resolution, and the tissues soon regained their healthy condition if suppuration did not take place. After septic poisoning, the peritonæum rapidly became inflamed, the circulation in the blood-vessels was more or less obstructed, and the action of the absorbents was greatly impeded. Finally a condition was produced which remained long after the symptoms had subsided, and one not prone to change or amenable to treatment. In such cases a fresh attack was provoked by slight causes. It had been objected that, when the abdominal cavity was opened for the removal of the ovaries, very slight evidences of inflammation were found. In a recent case, the author had expressed the opinion, from the vaginal examination, that a thickened and shortened left broad ligament would be found. At the operation no broad ligament was found, but there was an enlarged tube lying against the side of the vagina, and other like cases had been noted. They could be explained in this way: If there was an inflammation between the folds of the broad ligament, it must involve the peritonæum. As a result, the connective tissue disappeared and adhesion of the opposing surfaces took place. The broad ligament was flattened out so that Douglas's *cul de-sac* disappeared on that side. The vaginal wall was raised up so that it and the tube would lie in contact. This was the condition found in operations for the removal of diseased Fallopian tubes. In all these cases there had been inflammation of the connective tissue—primarily, except where the original inflammation was the result of gonorrhœa. If his observations were correct, they would prove that the connective tissue never regained its integrity after having once been inflamed. The term "thickening of the broad ligament" did not imply that there was a deposit of lymph between the layers of the ligament. The enlargement was, he thought, due to a dilated state of the veins. The condition was one easily aroused to activity. It was still doubtful how the tubes became involved where gonorrhœa was not the cause of the inflammation. In septic poisoning after surgical injuries, the connective tissue of the veins and lymphatics first become involved, and the inflammation of the peritonæum was secondary. There was no evidence that the inflammation passed into the uterine canal and thence to the tubes, except where the process was due to gonorrhœa.

The result to be gained by local treatment was doubtful in cases due to gonorrhœa, in those of long standing without reference to the cause, and in those with a history of frequently recurring attacks. With patients who could secure every attention, a cure by local treatment could sometimes be effected, but a long time was required. Those who had to make their own living might best be treated by operation, after a true representation of the operation and its results. We should enter a protest against the indiscriminate removal of tubes and ovaries. It required an expert to determine when the operation was necessary, and, still more, to do it with safety to the patient. It should only be done as a last resort, after other measures had failed. In a number of cases in private practice the author had succeeded by local treatment in restoring to health patients for whom the operation had been strongly urged. If we could get accurate statistics, it would probably be shown that the average amount of benefit did not compensate for the risk. The operation was done too often, even by those who had the lowest death-rate. He predicted that five years would not pass before it would be almost necessary to offer an apology when this operation was proposed.

Dr. **Robert Battey**, of Rome, Georgia, thought that the pelvic cellulitis which gave so much trouble was, in a large proportion of cases, secondary. So far as disease affecting the tubes was concerned, if we threw out of consideration the gonorrhœal cases, it started in the ovary. He regarded most of these serious inflammations of the pelvic cellular tissue as dependent upon cystic or cirrhotic disease of the ovary. With reference to the frequency with which the operation was done, he was largely in sympathy with the author. If he had a poor, miserable patient, without the means of comfortable subsistence, suffering with ovarian or tubular disease, he would operate. If he could put such a patient under suitable surroundings and under a prolonged course of treatment, he might not think of the knife, but we had to look at the cases as they existed. He did not require an absolute diagnosis of disease of the tubes or ovaries prior to operation. It was sufficient for him to know that the general health was broken down by reason of the perverted function of the ovaries, that the patient was utterly miserable, that there was no reasonable hope of her restoration to health by other means, and that there was a reasonable prospect of restoration by removal of the ovaries. Under such circumstances he unhesitatingly operated.

Dr. **Sutton** believed that, if the ovary was diseased and was a burden to the woman, it was as much a duty to remove it as to remove a diseased eyeball. He agreed, however, that the operation was done too often. The conditions demanding it were not always clearly understood before the abdomen was opened. It was not necessary to be positively certain of what would be found before operating. The speaker then presented several specimens, and described the cases in which they had been found.

Dr. **Samuel C. Busey**, of Washington, thought that, if pathologists would return to the histological basis, there would not be the difference of opinion which now existed. It was now held that the cellular tissue was really a vast lymphatic structure, and that the peritonæum was a large lymphatic sac. Instead of discussing nice distinctions between pelvic cellulitis and pelvic peritonitis, it would be better to classify these different varieties as pelvic lymphangeitis.

Dr. SCOTT mentioned some cases bearing upon the subject. In a case of supposed fibroid tumors the abdomen was opened, and both ovaries were found to contain pus. They were removed, and the patient recovered. Another patient had a tumor in the right side. The temperature record was kept for two months, during which time it did not vary half a degree. On opening the abdomen, the ovary was found to contain ten ounces of pus. The right ovary was removed, but the left appeared to be healthy and was left. During the operation the bladder was opened. This was sutured, and the patient made a good recovery. Five weeks later she complained of pain in the left side, and the left ovary was found to be enlarged. This was removed, and the patient promptly recovered. In a somewhat similar case, one ovary was removed. In a short time the other enlarged, but the operation was postponed, and the woman died of rupture of the abscess.

Dr. MATTHEW D. MANN, of Buffalo, alluded to the possibility of one tube and ovary being diseased without involvement of the other. In several cases where the disease appeared to be limited to one side, he had removed but one ovary, and the result had been a perfect cure. This avoided some of the objections urged against the removal of both ovaries.

Dr. WILSON, of Baltimore, believed that, where there was a general cellulitis, there was more or less pelvic peritonitis. These two affections were often associated. In the early stages the inflammation could often be controlled by active treatment. If it was not controlled, it might go on to the formation of abscess. The pus might be discharged and the patient recover. Occasionally the abscess occurred in the tube or ovary, and these were the cases in which laparotomy was often called for. He agreed that the operation was done too frequently. The point which Dr. Mann had raised, that it was not always necessary to remove both ovaries, was a very important one.

A Case of Abdominal Section for Chronic Suppurative Peritonitis was related by Dr. JOHN C. REEVE, of Dayton, Ohio. A woman nineteen years old, living as if married, had been healthy until last November, and had never been pregnant. Her physician found abdominal inflammation. On January 18th she was seen in consultation by the author. There was evidence of chronic peritonitis, but no history of a gonorrhœal origin could be obtained. One month later she began to pass pus by the rectum. After other measures of relief had failed, laparotomy was proposed in April, but declined. The patient was not seen again until June 20th, when she desired the operation. She had suffered with hectic, menstruation had ceased in January, and examination of the urine showed no albumin. There was great tenderness with hardness all over the abdomen, and pus was still passed with the stools. By vaginal examination no definite hardness could be detected. By the rectum there was ill-defined resonance high up on the left side. No opening into the rectum could be detected, although frequent examinations for this purpose were made. The patient was greatly emaciated, her weight having fallen from 125 to 70 pounds. The operation was performed June 23d. On opening the peritonæum, all the parts were found matted together. The abdomen was washed out by allowing water to run into it from a pipe and then syringing out what remained. Finally a cavity was reached in the left lumbar region. It was impossible to attach the walls of this cavity to the abdominal wound, and, as the condition of the patient was by this time alarming, a drainage-tube was introduced and the abdominal incision closed with sutures. In the course of several hours, the patient gradually rallied from the operation. The temperature did not go above 100° F. The cavity was washed out with a mixture of tincture of iodine and water. The upper two thirds of the abdominal wound failed to unite. On the fourteenth day a large quantity of fæcal matter came through the wound, and this had continued to recur. In July, evidences of Bright's disease were detected, but since then there had been some improvement in the general health. If the patient had consented to the operation when it was first proposed, the result might have been different. One of the principal objects of the paper was to ascertain if, as had been stated, fæcal fistula was an invariable consequence of laparotomy for abdominal inflammation in cases where pus had already escaped by the rectum.

Dr. SCOTT mentioned the case of a patient with prolapse, inflammation of the ovaries, and cellulitis. After three months' treatment without improvement, removal of the ovaries was recommended, but declined by the patient. She was kept under treatment for six months longer, when enlargement of the right ovary began. Pus was afterward discharged by the rectum, and subsequently the abscess opened into the bladder. The patient then consented to an operation. The abdomen was opened, an opening was made into the vagina, and a drainage-tube was introduced. The improvement was not marked, and in the course of two months the patient was as bad as ever. The removal of both ovaries and tubes was then performed. Four or five days after the operation fæces appeared in the wound. During the five months succeeding the operation, the fæcal fistula had closed, and the patient had gained flesh and was able to walk about.

Dr. JOSEPH T. JOHNSON, of Washington would suggest that in such cases as the one described by the author, where time was a matter of importance, much could be gained by adopting the procedure employed by Bantock and Tait. In washing out the abdominal cavity they poured the water into the cavity with a pitcher, using gallons at a time. In this way the cleansing was rapidly accomplished.

(*To be continued.*)

Book Notices.

Injuries of the Spine and Spinal Cord, without Apparent Mechanical Lesion, and Nervous Shock, in their Surgical and Medico-legal Aspects. By HERBERT W. PAGE, M. A., M. C. Cantab, F. R. C. S., Surgeon to and Lecturer on Surgery at St. Mary's Hospital, etc. Second Edition. Philadelphia: P. Blakiston, Son, & Co., 1885. Pp. xii–397. [Price, $3.50.]

THE subject of injuries to the spine in railroad accidents is one that has received much attention within the last thirty years, not only from the medical but also from the legal profession, and, notwithstanding much has been written regarding the result of these injuries, there is still considerable uncertainty as to their precise nature and the ultimate result as to the future of the unfortunate sufferer. In 1866 Mr. Erichsen published some lectures on "Concussion of the Spine," and in 1875, in a second edition of the work, several new chapters were added; since then this volume has been looked upon as almost an authority upon this class of injuries.

Mr. Page's book is intended to exhibit the subject in another light. The author states that it has fallen to his lot in the past nine years to see, in the capacity of surgeon to the London and North Western Railway Company, a large number of injuries about which but little information was to be learned in the text-books of medicine and surgery. The volume contains eight chapters and an appendix of cases. In chapter first the author discusses the subject of "concussion of the spinal cord." He states that this "is so free from the risks of concussion injury, owing to its unrivaled security in the spinal canal, that it seems highly improbable that it should be especially liable to suffer harm." He critically examines all the reported cases of concussion of this portion of the nervous system proving fatal, and in which a post-mortem examination has been held. He finds in all of them gross lesions of pressure or hæmorrhage, either into the substance of the cord or into the canal, and in no case was any appearance seen which could be attributed to simple concussion. He therefore concludes that pure concussion of the spinal cord, unaccompanied by other lesion, is not met with post mortem, and that we must look to other structures than the cord for an explanation of the symptoms following sudden jars.

In chapter second he deals with "concussion of the *spine*," so called, and points out the indefiniteness of the expression. Does it mean an injury to the muscles, ligaments, bones, joints, nerves, or the cord itself? Injuries to the back should not be included with lesions of the cord. He criticises Mr. Erichsen's lecture as rather tending to encourage litigation. Theories rather than facts seem to have characterized the writing of this distinguished surgeon upon this subject. It is a fact, known not only to the medical profession but also to the general public, that there is no more fruitful source of litigation than concussion of the spine, so called, following slight jars to the body occurring in railway collisions, the result being in many cases, up to a certain point, seemingly in inverse ratio to the severity of the original injury; and in those cases where litigation has ended and a substantial bonus been received for the supposed injury, how soon the unhappy sufferer is able to resume his business and forget his former disability! This is the history of so many cases that a very strong doubt, to say the least, must be raised as to the seriousness of the injury and the reality of the symptoms complained of. It is a curious fact that accidents of a similar nature, as far as the effect to the body is concerned, when there is no hope of remuneration, are soon recovered from. Chapter third is devoted to a consideration of "the common spinal injuries of railway collisions." The symptoms complained of are pain, tenderness along the spinal column, and a feeling of pins and needles in the extremities, and, at the time of the accident or shortly after, there is often considerable shock. The pain after the class of injuries under consideration resembles in all its characteristics that of an attack of acute lumbago. There is acute suffering on any movement of the body or limbs. There is also tenderness on pressure along the spinal column. It is a well-known fact that pain in the spinal column and tenderness over the vertebræ are *not* symptoms of grave spinal injury; they are seen often following sprains of the back after lifting a heavy weight. Disease of the vertebræ or the cord itself may go to its final issue with little or no tenderness of the vertebral column. The pseudo-paralyses with which these patients are often affected are not due to any cord lesion, but to the dread of pain which any movement of the body or limbs causes. The feeling of pins and needles is attributable to the same cause. The injury that most of the patients have received consists of a sprain of the ligaments and muscles of the back; the cord itself is in no way involved. The tendency is toward recovery, if the mental condition accompanying it can be overcome. This latter is due, first, to the shock and the dread of pain, and, secondly, to the anxiety and delays of litigation. The desire of the patient to put as serious an aspect as possible on his case, in the hope of obtaining more substantial remuneration for his injuries, is no small element in restraining him from the active exertion so necessary for his recovery. In this class of cases there can be no doubt that an injury has been sustained; its nature, however, is different from that usually assigned.

In chapters four and five "shock" is considered, and the subject is carefully treated. Chapter six is devoted to "functional and neuromimetic disorders, chapter seven to malingering, and chapter eight to "concluding remarks," while in an appendix is a table of two hundred and thirty-four cases. We wish that we had more space to notice the last few chapters, as they are well worthy of careful study, but we have already far exceeded our limit. We congratulate Mr. Page on his book, and trust that it may find a place in the library of every surgeon.

The Private Treatment of the Insane as Single Patients. By Edward East, M. R. C. S., L. S. A., etc. London: J. & A. Churchill, 1886. Pp. 68.

This little book is a step in the direction taken by several American alienists and neurologists some years since, of which movement the author appears to be in entire ignorance. That, however, is more his misfortune than his fault, and ought not to prevent our praising his very useful monograph. It seems to be the case, notwithstanding all the efforts that have been made to enlighten them, that general practitioners are in great measure ignorant of the advantages they possess for the successful treatment of many of the cases of insanity that come under their notice. As Mr. East says, most patients with acute mania, acute melancholia, or acute dementia, may be just as well treated in private and apart from others similarly affected as in an asylum. Of course it is not always advisable that they should be treated at home, but between absence from home, such as can be got in a family of sensible people, and an asylum, there is a great difference. Mr. East considers this and other points bearing on the matter with clearness and fairness. His remarks in regard to treatment are especially to be commended. It would be well if his views could be widely circulated in the medical profession of this country as well as in that of Great Britain. They are as much needed here as there.

Hand-book of Practical Medicine. By Hermann Eichhorst, Professor of Special Pathology and Therapeutics, and Director of the University Medical Clinic, in Zurich. Vol. I.—Diseases of the Circulatory and Respiratory Apparatus. One Hundred and Three Wood Engravings. Pp. v–407.
The same. Vol. II.—Diseases of the Digestive, Urinary, and Sexual Apparatus. One Hundred and Six Wood Engravings. Pp. vii–361. New York: William Wood & Co., 1886. [Wood's Library of Standard Medical Authors.]

A few years since, when the translation of von Ziemssen's "Handbuch" was issued under the editorship of Dr. Buck, it was frequently remarked that the value of the work, for American readers, would be enhanced by "boiling it down," so as to give the essential facts within a smaller compass.

No such complaint can be made in regard to the work of Professor Eichhorst. In two volumes of very moderate size we have presented all that the general practitioner requires on the subjects of which they treat.

The style is concise to the point of abruptness, and the reader's attention is not diverted by any digressions from the subject in hand, or lengthy discussions of the merits of conflicting theories. In the section on diseases of the heart the most recent views are given.

The subject of ulcerative endocarditis is particularly interesting, because of the attention it has lately received from pathologists and clinicians. The reader will find in this work all that can be said in regard to its clinical features. The author's views of its ætiology will be found to correspond to those expressed by Dr. Bramwell in his article in a recent number of the "American Journal of the Medical Sciences."

Angina pectoris is carefully described and as much light thrown upon its complicated pathology as is possible with our present knowledge. The treatment of the diseases in this section is carefully detailed, and many valuable formulæ are given, though the exclusive use of the metric system will embarrass those who have not become accustomed to it.

The chapters on the diseases of the respiratory apparatus are equally satisfactory. We would call attention especially to the section on asthma. In this the reader will find a description of the microscopical characters of the sputum, with drawings of Leyden's crystals, and of the peculiar spiral formations inclosed in the mucus.

The plates are excellent. They are a very valuable addition to the book. This is one of the most important of the works that Messrs. Wood & Co. have issued in their admirable annual series.

The second volume, like the first, is a model of the combination of fullness in detail with conciseness in expression. It opens with a good account of the diseases of the mouth and pharynx, giving a description of all the ordinary pathological conditions of these parts.

The plates which illustrate not only this section, but those following it, are well executed, and will be of great help to the student. The diseases of the stomach receive most careful consideration. It is interesting to read of incontinence of the pylorus, a condition which any one may encounter who attempts to irrigate that viscus prior to the introduction of food. "Peristaltic restlessness" is also a puzzling phenomenon, which we occasionally encounter in practice, but seldom see referred to in text-books.

The articles on diseases of the urinary organs are worthy of careful study. Special sections are devoted to albuminuria and uræmia, and the treatment of these topics is excellent both from a scientific and from a practical standpoint. The book is one which should be in the possession of every practitioner.

Diseases of the Stomach and Intestines. A Manual of Clinical Therapeutics for the Student and Practitioner. By Professor Dujardin-Beaumetz, Physician to the Cochin Hospital, etc., Paris. Translated from the Fourth French Edition, by E. P. Hurd, M. D., etc., Newburyport, Mass. With Illustrations and one Chromo-Lithograph. New York: William Wood & Co., 1886. Pp. xvi–1 to 389. [Wood's Library of Standard Medical Authors.]

Professor Dujardin-Beaumetz gives in this book a practical treatise upon the treatment of diseases of the stomach and intestines. He regards these disorders mainly from a clinical standpoint, and his classification is made with a view of indicating treatment—an arrangement presenting many advantages to the working physician.

Diabetic, hygienic, and therapeutic measures are carefully enumerated. The utility of stomach-washing and forced feeding is insisted upon. The value of these procedures has hardly been sufficiently appreciated by many physicians in this country. The indications for the use of the stomach-tube are pointed out in a special chapter, and again in the chapters on the dyspepsies. In all of these latter there are many useful suggestions concerning the medicinal and diabetic treatment of these disorders. The author lays little stress on the use of peptonized foods, but speaks highly of meat powders. The chapters on constipation and diarrhœa are especially worthy of study.

The book is full of good suggestions. The author's rich experience is supplemented with many references to other works. The translator's work is well done if one may judge from the easy style of the English version. It seems a pity that the title of the book is misleading, for it is a study of the treatment of the diseases named, rather than of the diseases themselves.

Eczema and its Management. A Practical Treatise based on the Study of Three Thousand Cases of the Disease. By L. Duncan Bulkley, A. M., M. D., Physician to the New York Skin and Cancer Hospital; Attending Physician for Skin and Venereal Diseases at the New York Hospital, Out-patient Department, etc. Second Edition. New York: G. P. Putnam's Sons, 1884. Pp. 344.

In 1881 the first edition of this exceedingly practical and useful book was published and duly noticed in these columns. We have carefully compared the two editions, and have found that the majority of the changes in the second edition are but improvements in style. The new matter added is of such little importance that any one who has the first edition need not feel compelled to buy the second. We have been able to find only the following additions: 1. Five hundred new cases are added to those of the first edition, which alters the percentages, but not materially. 2. On page 120 the author has thrown out the "woolen flannels" of the first edition and substituted "surgical dressings" as an exciting cause of eczema. 3. On page 174 he gives us his opinion that "wet babies"—*i. e.*, those who readily reject the surplus milk from the stomach—are far less liable to eczema than the "dry babies." 4. On page 200 we are cautioned against washing the scalp too often in cases of eczema of that region. 5. On page 246 the liquor picis alkalinus is recommended in the treatment of eczema of the legs. 6. On page 255 some additional and important diagnostic marks of eczema of the scrotum are given. 7. On page 262, under the ætiology of eczema scroti, "the irritating character of the secretions of the part" is given as a possible factor. 8. On page 331 we are urged to follow the method of preparation of the diachylon ointment recommended by Hebra.

These eight additions are all we can find after most careful scrutiny. We regret that no mention is made of some very decided advances in dermatological therapeutics, such as the use of pastes, like Lassar's, in acute and subacute eczema, and the employment of chrysarobin pigment in some cases of chronic eczema. But the book purports to treat only of the author's personal experience, and as such it is a work that no physician, whether general practitioner or specialist, can afford to be without. We must congratulate Dr. Bulkley upon the reception which it has met with, and express the hope that a third edition will be called for even sooner than the second one was.

The Disorders of Menstruation. A Practical Treatise. By John N. Upshur, M. D., Professor of Materia Medica and Therapeutics in the Medical College of Virginia. New York and London: G. P. Putnam's Sons, 1886. Pp. xii–200. [Price, $1.25.]

This book is spoken of as a "student's manual." We should state it as our belief that students do not require a separate manual upon menstruation and its disorders, and, as this book contains what would be found in any standard work on diseases of women, we see no good reason for its production. For the latter reason we find also little to criticise in the views expressed. From its style it appears to be intended for those almost without rudimentary ideas on the subjects treated of; yet there is little system observed. Subjects seem to have been spoken of as they occurred to the author's mind. The introduction reads as if the book was intended for the lay reader, and would certainly gratify the vanity of any woman from the touching tributes paid to her sex, and lead her to expect to find in the author a very sympathetic adviser. Oddly enough, we do not observe anything in this introductory chapter (which has a length of more than three pages) which seems to be needed by a medical reader. Throughout the book there is much that is obscure and confusing, owing to awkward arrangement of sentences and irregular punctuation. We think, too, that a writer who quotes so frequently from Emmet ought to spell his name correctly.

Clinical Notes on Uterine Surgery, with special reference to the Management of the Sterile Condition. By J. Marion Sims, A. B., M. D., etc. [Memorial Edition.] New York: William Wood & Co., 1886. Pp. xi–401. [Price, $1.]

The present volume is the result of the happy idea of republishing a book at a moderate price which had long been out of print—a fact that has caused no little regret to the generation of medical men who have arisen since the appearance of the first edition. No changes have been attempted in the volume before us; none would have been tolerated. While it can not be denied that some of the wood-cuts are inferior to those of the original edition, the points of difference between the two books are so slight as to be practically insignificant. On glancing over the familiar pages the thoughtful reader will always be struck with the wonderful versatility of the great man who tossed them off with such apparent carelessness, as if he little suspected that his work was to be immortal. We do not take a step backward in reading this most suggestive, though heterogeneous, collection of facts and theories. The facts are classical, and will be for ever; the theories will, doubtless, indicate lines of work for gynæcologists yet unborn.

Index-Catalogue of the Library of the Surgeon-General's Office, United States Army. Authors and Subjects. Vol. VII. Insignarès—Leghorn. Washington: Government Printing-Office, 1886. Pp. [100]–959.

There is little to be said with special reference to this particular volume of Surgeon Billings's great work. The accuracy and comprehensiveness displayed in it are, as in its predecessors, such as to call forth nothing but admiration. The hundred pages of preliminary matter are devoted to a consolidated list of the abbreviations of the titles of periodicals, in which the additions made in the volume are incorporated with those introduced into the preceding volumes. This has been done to save the reader the necessity, in some cases, of consulting several volumes in order to determine the precise scope of a given abbreviation. Those who make use of the work will surely thank Dr. Billings for this time-saving aid.

Herschell's Urethral Charts. London: Henry Kimpton.

This seems to be an era of charts of all sorts, and this one increases their number. It is a book, or rather pamphlet, eight inches and a half long, and three inches wide, designed as a means of readily registering the number, sizes, and locations of urethral strictures. The chart consists of a number of horizontal lines placed at a distance of one millimetre apart, every fifth one being heavily shaded. These lines represent the circumference of the urethra, and are crossed by a number of perpendicular lines placed at a distance of half a centimetre apart, which represent the distance of the stricture from the meatus, the left-hand heavy bounding line of the chart representing the meatus. Rules are given upon the cover for the proper use of the chart. In such a disease as stricture, it does not seem as if a chart offered any advantage over an ordinary note-book, but perhaps a book like this might prove useful to one who had a fancy for diagrammatic note-taking.

A Guide to the Practical Examination of Urine. For the Use of Physicians and Students. By James Tyson, M. D., Professor of General Pathology and Morbid Anatomy in the University of Pennsylvania, etc. Fifth Edition, revised and corrected. With Colored Plates and Wood Engravings. Philadelphia: P. Blakiston, Son, & Co., 1885. Pp. xii–248. [Price, $1.50.]

This well-known work has been so often mentioned in terms of high approval that to repeat its praises would be but to reiterate what has recently been written. The new tests for albumin, mucin, and peptone (pages 42, 55, and 59) are the most important additions, but the entire volume has been carefully revised. It is difficult to mention a book of the size which has been brought more nearly to a state of perfection than Dr. Tyson's. It is one to which the trite and often meaningless phrase, "no physician should be without it," may be applied in perfect sincerity.

Diseases of the Nose. By Clinton Wagner, M. D., Professor of Diseases of the Nose and Throat in the New York Post-graduate Medical School, Senior Surgeon, Metropolitan Throat Hospital, etc. With illustrations of instruments and pathological conditions. New York: Bermingham & Co. Pp. 250.

The enviable position held by the author among leading American specialists, and the extraordinary clinical opportunities which he has for many years enjoyed, will cause this book to be read with more than ordinary interest. Its most valuable chapters are those devoted to the surgery of the nose, in which many useful suggestions are offered and much originality is displayed.

Post-Mortem Examination, with Especial Reference to Medicolegal Practice. By Professor Rudolf Virchow, of the Berlin Charity Hospital. Translated by T. P. Smith, M. D., etc. Philadelphia: P. Blakiston, Son, & Co., 1885. Pp. viii–138.

This useful little work has long been familiar to English readers through the medium of a former translation. The present volume is more elaborate than the other, containing not only more matter, but three excellent illustrations. The translation is smooth and beyond criticism, if we except the awkward expression in the opening sentence. The translator ought not to have considered his work as finished until he had supplied the serious deficiency of the original—an index.

A Manual of Auscultation and Percussion, embracing the Physical Diagnosis of Diseases of the Lungs and Heart, and of Thoracic Aneurysm. By Austin Flint, M. D., LL. D., etc. Fourth Edition, thoroughly revised and enlarged. Illustrated with Fourteen Woodcuts. Philadelphia: Lea Brothers & Co., 1885. Pp. xii–13 to 280.

The late Professor Flint's work is so well known that an extended notice is unnecessary. It preserves its original form, but has been thoroughly revised, and much improved by the introduction of new figures (pp. 36–39).

The Urine in Disease. Compiled by Louis Lewis, M. D., M. R. C. S. E. [Chart.]

The author has arranged in chart form, for convenient use in the office or class-room, a table which shows at a glance the principal abnormal ingredients of the urine, whith the salient characteristics which are associated with them, and the ordinary tests. For a busy person the use of this chart means economy of time.

GENERAL LITERARY NOTES.

Among the new books and new editions published in Europe we note the following:

J. & A. Churchill, London.—A Committee of the Royal College of Physicians of London, Harvey's "Prælectiones anatomiæ." (4to. £2 12*s.* 6*d.*) —— C. F. Pollock, "On the Normal and Pathological Histology of the Human Eye and Eyelids." (100 lithographic plates. 15*s.*) —— Donald Hood, "On Diseases and their Commencement." (Lectures to nurses. 2*s.* 6*d.*) —— Tom Robinson, "On the Diagnosis and Treatment of Syphilis." (3*s.* 6*d.*) —— T. W. Nunn, "Cancer of the Breast." (£2 2*s.*)

H. K. Lewis, London.—U. Pritchard, "Handbook of Diseases of the Ear." (4*s.* 6*d.*) —— H. C. Bastian, "Paralyses: Cerebral, Bulbar, and Spinal." (12*s.* 6*d.*) —— W. Murrell, "Massage." (3*s.* 6*d.*) —— W. Martindale, "The Extra Pharmacopœia." (4th ed. 7*s.*) —— W. Martindale, "Coca, Cocaine," etc. (2*s.*) —— Robson Roose, "Gout." (2d ed. 3*s.* 6*d.*) —— R. L. Roberts, "Ambulance Work." (2*s.* 6*d.*)

Edward Stanford, London.—H. F. Baker, "Practical Notes on the Treatment of Deformities." (5*s.*)

The New Sydenham Society, London.—W. W. Cheyne, "Bacteria in Relation to Disease." —— H. Power and L. Sedgwick, "Lexicon of Medicine," part xii.

W. & A. K. Johnston, Edinburgh.—D. B. Hart and A. H. F. Barbour, "Manual of Gynæcology." (3d ed. 25*s.*)

E. & S. Livingstone, Edinburgh.—"Edinburgh Medical School Calendar and Guide to Students," 1886–'87. (1*s.* 2*d.*)

Oliver & Boyd, Edinburgh.—G. F. Blandford, "Insanity and its Treatment." (10*s.* 6*d.*)

J. B. Baillière et Fils, Paris.—A. Foville, "La legislation relative aux aliénés en Angleterre et en Écosse." (5*fr.*) —— P. Moreau, "Fous et bouffons, étude physiologique, psychologique, et historique." (3*fr.* 50.) —— E. Gavoy, "L'encéphale; structure et description iconographique du cerveau, du cervelet et du bulbe." (4to, with atlas of 59 plates. 100*fr.*) —— A. Cullerre, "Magnetisme et hypnotisme." (4*fr.*) —— H. Beaunis, "Le somnambulisme provoqué." (3*fr.*)

Wilhelm Braumüller, Vienna.—E. Van Ermengen (Dtsch. von R. Kukula), "Neue Untersuchungen über die Choleramikroben." (4*M.*) —— J. Schwarz, "Die Heilquellen Badens." (1*M.* 40.)

Breitkopf & Härtel, Leipsic.—O. Bumm, "Ueber die Entzündungen der weiblichen Brustdrüse." (75*Pf.*) —— C. Schrauth, "Das Lustgas und seine Verwendbarkeit in der Chirurgie." (75*Pf.*) —— R. von den Velden, "Hypersecretion und Hyperacidität des Magensaftes." (75*Pf.*)

Max Cohen & Sohn, Bonn.—K. Schröder, "Lehrbuch der Geburtshilfe mit Einschluss der Pathologie der Schwangerschaft und des Wochenbettes." (9th ed. 16*M.*) —— W. Waldeyer, "Medianschnitt einer Hochschwangeren bei Steisslage des Fötus, nebst Bemerkungen über die Lage- und Formverhältnisse des Uterus gravidus nach Längs- und Querschnitten." (40*M.*)

Ferdinand Enke, Stuttgart.—A. Hegar, "Die Entstehung, Diagnose und chirurgische Behandlung der Genitaltuberculose des Weibes." (2*M.*) —— C. Kaufmann, "Verletzungen und Krankheiten der männlichen Harnröhre und des Penis." (8*M.* 40.)

Faber, Magdeburg.—Aufrecht, "Pathologische Mittheilungen," iii. (2*M.*)

J. A. Finsterlin, Munich.—C. Seitz, "Bakteriologische Studien zur Typhusätiologie." (2*M.* 40.)

Fischer, Berlin.—"Führer durch das medicinische Berlin." (2*M.*)

Gustav Fischer, Jena.—K. Bürkner, "Atlas von Beleuchtungsbildern des Trommelfells." (10 *M.*)

Eugen Grosser, Berlin.—M. Breitung, "Ueber neuere Leichenanstalten." (1*M.*)

August Hirschwald, Berlin.—L. Brieger, "Untersuchungen über Ptomaine." (2*M.* 80.) —— Ehrlich, "Beiträge zur Theorie der Bacillenfärbung." (40*Pf.*) —— A. Rheinstädter, "Praktische Grundzüge der Gynäkologie." (9*M.*) —— J. Zabludowski, "Zur Massagetherapie." (80*Pf.*)

Heuser, Neuwied.—H. Ferdy, "Die Mittel zur Verhütung der Conception, nebst einem Versuche zur kritischen Entscheidung eines streitigen Punktes der Conceptionstheorie." (1*M.* 20.)

Moritz Perles, Vienna.—T. Puschmann, "Die Medicin in Wien während der letzten 100 Jahre." (8*M.*) —— Jacob Pollach, "Compendium der Balneotherapie." (5*M.*)

Hermann, Risel & Co., Hagen i. W.—A. Witzel, "Deutsche Zahnheilkunde, i: ueber Cocain-Anästhesie bei Operationen in der Mundhöhle." (2*M.*)

Stahel, Würzburg.—Bumm, "Zur Ætiologie und diagnostischen Bedeutung der Papillome der weiblichen Genitalien." (40*Pf.*) —— F. Decker, "Ueber eine seltene Varietät der Arterien der Hirnbasis." (30*Pf.*) —— Kunkel, "Die Leber als Ausscheidungsorgan frundartiger Blutbestandtheile, über die Temperatur der menschlichen Haut." (20*Pf.*) —— Riedinger, "Ueber Nervenchirurgie." (20*Pf.*) —— Seifert, "Ueber Cocain und Cocainismus." (40*Pf.*)

G. Szelinski, Vienna.—S. Fried, "Der moderne Geheimmittelschwindel." (1*M.*)

Töplitz & Deuticke, Vienna.—E. Baumgarten, "Die Epistaxis und ihre Behandlung vom rhinochirurgischen Standpunkte." (1*M.* 40.) —— J. M. Charcot (Dtsch. von S. Freud), "Neue Vorlesungen über die Krankheiten des Nervensystems, insbesondere über Hysterie." (9*M.*)

Urban & Schwarzenberg, Vienna.—"Recepttaschenbuch, Klinisches, für Praktische Aerzte." (8th ed. 2*M.*)

F. C. W. Vogel, Leipsic.—F. V. Birch-Hirschfeld, "Lehrbuch der pathologischen Anatomie." (3d ed., vol. i. 10*M.*) —— K. Huber u. A. Becker, "Die pathologisch-histologischen und bakteriologischen Untersuchungsmethoden." (4*M.*) —— A. Strümpell, "Lehrbuch der speciellen Pathologie und Therapie der inneren Krankheiten." (3d ed. Bd. i, 14*M*; Bd. ii, 8*M.*)

Carl Winter, Heidelberg.—J. Arnold, "Ueber das Vorkommen heller Muskeln beim Menschen." (1*M.*) —— F. A. Kehrer, "Ueber die Veränderungen der Pulskurve im Puerperium." (2*M.* 40.) —— W. Kühne, "Ueber die Wirkung des Pfeilgiftes auf die Nervenstämme." (1*M.*) —— F. Schultze, "Beitrag zur Lehre von den angeborenen Hirndefekten (Porencephalie). (1*M.* 60.)

A. Zimmer, Berlin.—E. Reich, "Der Epilepsismus aus dem Gesichtspunkte der Medicin, Strafrechtspflege und Staatskunst." (2*M.*) —— E. Reich, "Die Erblichkeit der Gebrechen der Menschen und die Verhütung der Gebrechlichkeit." (2d ed. 4*M.* 50.)

F. Garcia, Madrid.—A. Marín Perujo, "Higiene Rural." (24*r.*)

G. Hernandez, Madrid.—B. Busto y Barrosa, "Consideraciones Generales sobre la Teoria Patogénica del Parásito." (6*r.*)

BOOKS AND PAMPHLETS RECEIVED.

The Ætiology and Treatment of the Summer Diarrhœa of Infants. By H. C. Haven, M. D. Boston, Mass. [Reprinted from the "Archives of Pædiatrics."]

Fifteenth Annual Report of the Managers of the Buffalo State Asylum for the Insane. For the Year 1885.

A Treatise on the Practice of Medicine, for the Use of Students and Practitioners of Medicine. By Roberts Bartholow, M. A., M. D., LL. D., Professor of Materia Medica, General Therapeutics, and Hygiene in the Jefferson Medical College of Philadelphia, etc. Sixth Edition, revised and enlarged. New York: D. Appleton & Company, 1886. Pp. xxiv–987. [Price, Cloth, $5.]

Paralyses: Cerebral, Bulbar, and Spinal. A Manual of Diagnosis for Students and Practitioners. By H. Charlton Bastian, M. A., M. D., F. R. S., Fellow of the Royal College of Physicians, London, etc. With numerous Illustrations. New York: D. Appleton & Company, 1886. Pp. xi–671. [Price, $4.50.]

The Sheltering Arms. Twenty-second Annual Report. New York, 1886.

On Toxic Urine in Relation to Certain Surgical Operations on the Urinary Organs. By Reginald Harrison, F. R. C. S., Surgeon to the Liverpool Royal Infirmary, etc. [Reprinted from the "Liverpool Medico-chirurgical Journal."]

Du traitement des phénomènes douloureux de l'ataxie locomotrice progressive par pulvérisations d'éther et de chlorure de methyle. Par A. G. Raison, docteur en médecine. Paris: Aux bureau du Progrès médical, 1886. Pp. 42. Prix, 2 fr. 50 c.

Operations on the Drum-head for Impaired Hearing; with Fourteen Cases. By Seth S. Bishop, M. D., etc. Chicago. [Reprinted from the "Journal of the Americal Medical Association."]

The Sanitary Condition of Harrisburg, Pa. By Hugh Hamilton, M. Sc., M. D., Harrisburg.

A Text-book of Human Physiology, including Histology and Microscopical Anatomy; with special reference to the requirements of Practical Medicine. By Dr. L. Landois, Professor of Physiology and Director of the Physiological Institute, University of Greifswald. Second American, translated from the Fifth German Edition. With Additions by William Stirling, M. D., Sc. D., etc. With 583 Illustrations. Philadelphia: P. Blakiston, Son, & Co., 1886. Pp. xxxix–17 to 922. [Price, $6.50.]

Rheumatism: its Nature, its Pathology, and its successful Treatment. By T. J. Maclagan, M. D. New York: William Wood & Company, 1886. Pp. viii–1 to 277. [Wood's Library of Standard Medical Authors.]

Galvano-Cautery in Diseases of the Prostate, Bladder, and Urethra. By Robert Newman, M. D. New York. [Reprinted from the "Journal of the American Medical Association."]

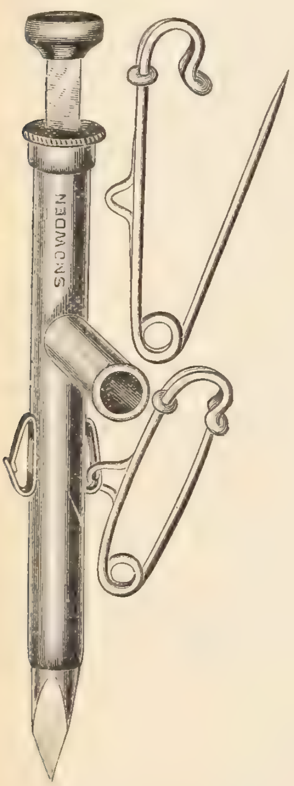
New Inventions, etc.

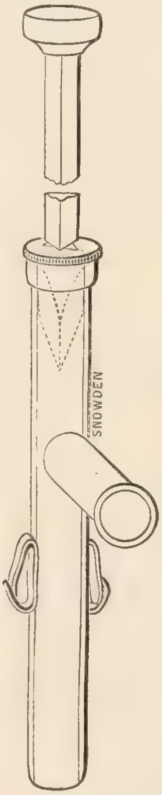
A NEW OVARIOTOMY TROCAR.

By William C. Wile, M. D., Newtown, Conn.,

Vice-President of the American Medical Association, etc.

Evacuating the contents of a simple cyst of the ovary, without any adhesions or complications, is a comparatively easy affair, and it does not matter much whether we have a trocar or not. But in the case of extensive or even moderate adhesions, or a tender, fragile, or suppurating sac, it is necessary that we should have an instrument which is thoroughly reliable, and one which will be simple in its mechanical action.





With quite a little experience in the operation for the removal of ovarian tumors, I have found all the trocars in the market unreliable, inasmuch as the apparatus for keeping the sac in contact with the cannula does not work well. I therefore, over a year ago, devised the one illustrated by the accompanying cuts (which will serve to elucidate the text), which seems to fill every indication. The instrument is pushed into the sac in the ordinary way, and the knife, which is mounted on a triangular piece of metal having a slot at its lower extremity near the blade, is withdrawn through the triangular opening in the cap as far as it will go, then, by giving it a half-turn, it will become fastened in place, and the danger of the knife falling down during the evacuation will be entirely avoided. The knife is sharp and slender, the sides of the blades being convex, which make it easy of introduction.

As soon as the contents begin to flow the sac wrinkles, and at this time one of the horse-blanket pins is passed through a fold in the sac and fastened, and the loop at the top of the pin is caught in the spring-catch at the side of the cannula; then the other is used in the same way and secured in a like manner. Now the assistant has sure and entire control of the sac and contents.

As soon as the sac is evacuated, the pins are taken out of the catches and handed to an assistant, and the trocar is withdrawn. From this time on the sac can be manipulated by the use of the pins, which serve as handles, and never get loose; all danger of any of the contents getting into the abdominal cavity being entirely avoided, and the danger of septic poisoning from this cause prevented.

The control over the sac from first to last is simply complete, and I know of no instrument of its kind so simple in its workings or so efficacious. It was made for me, in the most thorough manner, by William Snowden, of Philadelphia.

Miscellany.

The American Gynæcological Society.—At the meeting recently held in Baltimore, the following-named gentlemen were elected to membership: Dr. Charles M. Green, of Boston; Dr. A. F. A. King, of Washington; Dr. E. C. Dudley, of Chicago; Dr. A. W. Johnstone, of Danville, Ky.; Dr. B. F. Baer, of Philadelphia; and Dr. J. E. Janvrin, Dr. H. Marion-Sims, and Dr. W. Gill Wylie, of New York.

A communication with reference to the organization of a Congress of American Physicians and Surgeons having been received, Dr. John C. Reeve, of Dayton, O., offered a resolution declaring "that this society expresses an opinion favorable to the formation of the proposed congress, but that the committee be instructed not to favor any plan looking toward a surrendering of its distinctive title or character, or toward interference with the full and entire management of its own affairs in every respect." The following amendments were offered and accepted: 1. "That this society does not favor meetings of the congress oftener than biennially." 2. "That the committee oppose as far as possible meetings in the month of June." The resolution was carried as amended. The committee consists of Dr. Samuel C. Busey, of Washington; Dr. Fordyce Barker, of New York; Dr. T. A. Emmet, of New York; Dr. J. R. Chadwick, of Boston; and Dr. J. Taber Johnson, of Washington.

The late Dr. Frank H. Hamilton.—At a meeting of the Society of Medical Jurisprudence and State Medicine, held last Thursday evening in memory of the late Dr. Hamilton, who was the society's president at the time of his death, the order of exercises included opening remarks by the vice-president, the Hon. Amos G. Hull; a eulogy by the president of the New York County Medical Association, Dr. Charles A. Leale, with the introduction of resolutions prepared by a committee of arrangements consisting of himself as chairman, Dr. C. S. Wood, Mr. E. H. Benn, Dr. E. C. Harwood, and Mr. C. H. Kitchell; an address by General Calvin E. Pratt, Justice of the Supreme Court; and remarks by members of the society and invited guests of the legal, medical, and military professions. The resolutions prepared by the committee were the following:

"*Whereas*, The medical and legal professions have sustained a sad bereavement in the death of Professor Frank Hastings Hamilton, A. M., M. D., LL. D., late president of the Society of Medical Jurisprudence and State Medicine, which occurred at his residence on the 11th day of August, 1886; and

"*Whereas*, It is eminently proper for us, in our associated as well as private relations, to express our great admiration of the life and character of one who has done so much to elevate medico-legal science; therefore,

"*Resolved*, That, as a society composed of members representing two of the learned professions which he labored so hard to advance and harmonize, we add our tribute of loving esteem;

"*Resolved*, That Dr. Hamilton, from his pre-eminent talents and his position as a teacher, writer, and practitioner, covering a period of over half a century, has been the means of deciding many perplexing questions coming properly within the jurisdiction of our society, and has thereby greatly relieved the professions from the malice of unwarrantable litigations;

"*Resolved*, That the humanity, benevolence, and fixedness of purpose exhibited during many years of constant professional toil under numerous trying circumstances, ever with the sincere desire to promote his art and benefit mankind, have ennobled his character and left to us a name worthy of our highest emulation;

"*Resolved*, That the example of his life, diligent study in early youth, manifest desire to acquire knowledge by carefully searching the museums of America and Europe for anatomical specimens to settle disputes in surgical pathology, his translations of foreign medical works, his careful and accurate teachings united with a stern integrity ever to be truthful, and, last but not least, his monumental volumes on fractures and dislocations, which have been the standard works recommended by colleges at home and abroad, and remain to-day unequaled in surgical literature, having been translated into many foreign languages, and are the acknowledged authorities wherever surgery or medical jurisprudence is taught—these, with many other honorable characteristics, have justly endeared his memory to every true and faithful member of our professions, and placed his name upon the scroll of the illustrious men of the first century of American history."

The late Editor of the "Lancet."—The funeral of the late Dr. Wakley took place on Saturday, September 4th. In its issue for the 11th of that month the "Lancet" said:

"For the past quarter of a century the name of Dr. James G. Wakley has been intimately associated with this journal, and now that the last tribute of affection and esteem has been paid him, and the grave has closed over his remains in the spot that he had himself selected for their last resting-place, we feel that an affectionate record of the event should find a place in these pages. The funeral was very numerously attended by his relatives, by representatives of his editorial staff, by members of the medical profession, and by friends and sympathizers. As one approached his residence the signs of a respectful observance of the occasion were plainly discernible in the country around; but it was not until the funeral *cortége* left the house, with the coffin covered by floral wreaths and designs, followed by a long line of carriages, that any adequate notion could be realized of the respect and esteem in which he was held. All the shops and cottages along the route manifested tokens of mourning, even the public-houses being closed. The churchyard was full of country people of all ages from the parishes in its vicinity. There were old men and women, maidens and children, poor enough for the most part, but not too poor to have provided themselves with something in the shape of mourning to mark their respect for the friend and neighbor they had lost. As soon as all had passed into the little church and a brief interval was allowed for quietude, the funeral service commenced. . . .

"This part of the ceremony over, the body was borne to the cemetery hard by. The attendance at the grave was very large, made up, as we have said, for the most part of the villagers, among whom the late Dr. Wakley had spent so many years of his life, and to whom he had evidently endeared himself by his numerous acts of unostentatious benevolence and charity. After the sublime sentences of that service with which it is the lot of few indeed not to be acquainted, a hymn was sung, in which all present joined. We feel sure that it was just as our friend would have desired. To die among those we love, to be buried in the midst of scenes that were once so familiar, and to be followed to the grave by the poor, the aged, and the village children, about the sincerity of whose regret there could be no suspicion—what could be better? . . .

"On the evening of the 5th inst., the Rev. T. S. Coles, M. A., taking his text from Isaiah (chap. xxx, v. 18), after some preliminary words, made the following observations relating to Dr. Wakley:

"'And now it is time for me to make some remarks about him over whom the grave closed yesterday with solemnity and honor. In many senses our departed friend may be called a public character. He was a principal founder of the London Hospital Sunday; he was editor of the leading medical journal, the "Lancet," and, aided by his staff, he called attention to and contributed to improve the sanitary condition of several of our large towns. It is not of these, however, we now speak, but as he is personally known throughout this parish by his familiar form and acts. He was a man of quick sensibility, and gifted with wide sympathies, especially in want and distress. I have had many occasions for naming those who stood in need of help, and I never knew an instance in which he withheld succor. His ear was attent, and he had a hand "open as day for melting charity." His liberality, great at all times, was markedly so at Christmas, in the munificent distribution of gifts among all his poorer neighbors. If tears are the distillation of the heart, these will flow plentifully from many eyes in the freshness of his memory. Yet he had a higher aim, the spiritual benefit of the surrounding poor, and of others at a distance. For this end he might be frequently found in the abodes of indigence and suffering, with an open Bible and on bended knees.'"

Spontaneous Transformation of Morphine into Apomorphine.—A solution of hydrochlorate of morphine for subcutaneous injection (3 per cent.) was ordered for a patient, and its injection was promptly followed by relief of the pain, without any gastric symptoms whatever. Eleven months later, the patient made use of the same solution; but this time the injections gave rise immediately to violent and uncontrollable vomiting. The solution was given to a well-known analyst at Paris for examination, and he ascertained that apomorphine was present, thus accounting for the sickness. He recommended, in consequence, that solutions of the salts of morphine should never be kept longer than four weeks, and that freshly prepared solutions should not be mixed with the old.—*British Medical Journal.*

The American Academy of Medicine will hold its annual meeting at Pittsburgh, Pa., on Tuesday and Wednesday, the 12th and 13th inst. Papers are expected to be read by Dr. Nathan Allen, of Lowell, Mass.; Dr. Lewis P. Bush, of Wilmington, Del.; Dr. P. S. Conner, of Cincinnati; Dr. F. H. Gerrish, of Portland, Me.; Dr. V. P. Gibney, of New York; Dr. Traill Green, of Easton, Pa.; Dr. John D. Kelly, of Lowville, N. Y.; Dr. Andrew C. Kemper, of Cincinnati; Dr. Horace Lathrop, of Cooperstown, N. Y.; Dr. Benjamin Lee, of Philadelphia; Dr. William S. Little, of Philadelphia; Dr. James C. Morris, of Philadelphia; Dr. Robert L. Sibbet, of Carlisle, Pa.; and Dr. George E. Stubbs, of Philadelphia.

Papine.—In the August number of the "Virginia Medical Monthly," Dr. William J. Crittenden, of Unionville, Va., says:

"In the practice of medicine we are often called upon to treat patients who possess a peculiar idiosyncrasy as to the effects of opium or any of its preparations. During January, 1886, I was called to see a lady suffering with acute peritonitis. She assured me that she could not use opium, as she had tried it previously. But I gave her one eighth grain of morphine sulphate and one one hundred and twentieth grain of atropine sulphate hypodermically, and in a few minutes the depressing effect was noted, both upon the respiration and circulation; the pupils also became visibly contracted. I then tried the various usual substitutes for morphine in succession, but with no effect. I determined to try papine; but, not being able to give it by the mouth on account of nausea, and as she objected to the use of the hypodermic needle, I gave her two drachms per rectum, and repeated it in one hour. The result was that she sank into a quiet, peaceful sleep, which lasted for several hours. During the remainder of her sickness I gave her papine with most the gratifying results. As soon as her stomach would retain it, I gave it to her by the mouth in one-drachm doses. I have also used papine in a case of uterine cancer, in lieu of morphine. To cases in which patients have been taking morphine until it has lost its anodyne influence, papine is well adapted. Some time ago (in the absence of the family physician) I was called to see a lady one night, in great haste, who was suffering with malignant disease of the uterus. On my arrival the nurse informed me that she had given her a grain of morphine, with a suitable percentage of atropine, every hour for five or six hours, and during the intervals she had given her chloroform, but with no effect whatever. Accordingly, I gave her xxx minims of papine with an eighth of a grain of morphine sulphate, repeating it in fifteen minutes, and in a short time she fell asleep and slept for six hours, which was more than she had slept at a time for months."

The "Journal of Comparative Medicine and Surgery."—We are glad to learn of a number of circumstances that seem likely to increase the prosperity of this excellent journal. In the editorial management Dr. Conklin is to have the assistance of Dr. Huidekoper, of Philadelphia. Among the new collaborators are Dr. Johne, of Dresden; Dr. James Tyson, Dr. William Osler, Dr. E. O. Shakespeare, Dr. Thomas B. Rogers, Dr. Joseph Leidy, Dr. Henry C. Chapman, Dr. W. L. Zuill, and Dr. R. Meade Smith, of Philadelphia; Dr. A. W. Clement and Dr. D. McEachran, of Montreal; Dr. G. H. Lyman, of Boston; Dr. A. T. Yokura, of Tokio; Dr. W. T. Duncan, of Toronto; and Dr. E. C. Spitzka, of New York. The journal is to be published in Philadelphia.

A Farewell Dinner to Dr. R. T. Edes, as we learn from the "Boston Medical and Surgical Journal," was given at Young's Hotel, Boston, Friday evening, September 17th, prior to his departure for Washington, where he intends to make his home and practice his profession. About thirty of Dr. Edes's medical colleagues sat down at the table with him, the staff of the City Hospital, the Harvard Medical School, and the Dorchester Medical Club being especially represented. Dr. Francis Minot presided, and addressed the guest of the evening on behalf of the Harvard Medical School; Dr. H. W. Williams spoke for the staff of the City Hospital; Dr. W. S. Everett for the Dorchester Medical Club, and short speeches were also made by Dr. Wigglesworth, Dr. Morton Prince, Dr. W. L. Richardson, and Dr. George B. Shattuck. Sincere regret at Dr. Edes's departure from Boston, and warm wishes for his future welfare and happiness, were the common sentiments expressed by all.

The Health of San Francisco.—It appears by the "Condensed Statement of Mortality" for the month of August that, in a total of 408 deaths (against 455 in the same month in 1885), there were 9 from cholera infantum, 12 from croup and diphtheria, 6 from diarrhœa, 19 from typhoid fever, 2 from whooping-cough, and 5 from pyæmia. None were reported as the result of puerperal diseases.

The German Faculties.—The "Progrès médical" states that at Strassburg Dr. A. Wolf has been nominated professor of dermatology, in place of Professor Wieger, retired, and that Dr. Richard Ewald, a Privat-Docent, has been nominated an extraordinary professor; that Privat-Docent Koperwicki, of Krakow, has been made an extraordinary professor; that Dr. Salewski, extraordinary professor of pharmacology at Kharkoff, has been made an ordinary professor; that Dr. J. Möller, a Privat-Docent at Vienna, has been appointed professor of pharmacology at Innspruck; that Dr. O. Kahler has been nominated ordinary professor of special pathology and therapeutics in the German faculty at Prague, and Dr. Bandl, of Vienna, appointed to succeed Professor Breisky as professor of gynæcology and obstetrics in the same faculty; and that Dr. von Jirus, of Agram, has been made ordinary professor of pharmacology in the Tschek faculty at Prague.

THERAPEUTICAL NOTES.

Nothnagel's Treatment of Pericarditis.—In a recent lecture ("Lancet," September 4, 1886) Nothnagel outlines his treatment of this affection as follows: In the early stage, before exudation has begun, from three to ten leeches may be applied over the præcordia, to be renewed every three or four days. An ice-bag or a cold-water coil is useful when there are much pain and fever. Digitalis is indicated if the heart's action is decidedly increased, especially if the muscle appears to be affected; it should not be given early in the disease. All other internal remedies are without effect. After the effusion has occurred, cold and bleeding are useless, counter-irritation being indicated, especially in subacute pericarditis. Tincture of iodine with galls (equal parts) or the ordinary fly-blister is recommended; paracentesis should be resorted to only when life is threatened.

Intra-peritoneal Injections in Acute Hæmorrhage. — Rütgers ("Ctrlbl. f. d. med. Wissensch.," August 7, 1886) reports the case of a woman who had lost so much blood from post-partum hæmorrhage that she was apparently moribund. The veins did not swell on applying ligatures above them, so that it was impossible to employ intra-venous injections. The following solution was injected into the abdominal cavity through a cannula:

Salt	90 grains;
Sodium hydrate	5 "
Distilled water	34 fluidounces.

After experiencing severe pain in the abdomen for three days, during which time the temperature was subnormal, the patient rallied and did well.

The Therapeutic Action of Common Salt.—Branche ("London Med. Record," July 15, 1886), reviewing recent observations on the use of this domestic article, asserts that salt is a valuable remedy in the treatment of scrofula, anæmia, and tuberculosis. Pidoux advises phthisical subjects to use it in excess with their meals. Bouchardat observes that salt lessens the excretion of sugar in diabetics, and at the same time diminishes their thirst. Reliable observers have reported cures from the administration of salt in doses of from 150 to 225 grains in cases of intermittent fever.

Permanganate of Potassium in Burns and Frost-bites.—Züboff ("Meditzinsko Obozrenië"; "London Med. Record") reports forty-four cases of burns and thirteen of frost-bite which were treated with local applications of a solution of the permanganate containing one or two grains to the ounce of water. He finds the solution most useful in the treatment of frost-bite; it relieves pain, allays inflammation, and prevents suppuration in blisters. In burns of the second degree a half-grain solution is preferable.

Cocaine as a Diuretic.—Dr. Da Costa and Dr. Penrose ("Med. News," June 19, 1886) have obtained a marked diuretic action with this drug, administered in doses of from half a grain to a grain two or three times daily. It is especially recommended in cases of cardiac insufficiency with dropsy.

Caffeine as a Diuretic.—W. v. Schröder ("Ctrlbl. f. d. Med. Wissensch.," 1886, No. 26) asserts that the diuretic action of caffeine is due to a direct stimulation of the renal epithelia rather than to an increase of the blood-pressure. Langgaard (*ibid.*, No. 29) reaches the same conclusion as the result of independent experiments.

ANSWERS TO CORRESPONDENTS.

The Question of Patents.—A correspondent asks our advice as to the propriety of his patenting a surgical device. All things considered, we advise him not to do it. We do not consider it necessarily reprehensible for a physician to patent an invention pertaining to the practice of his art, but it is repugnant to a great many members of the profession, and we think that their sentiments should be respected.

The Odor of Iodoform.—To a correspondent who asks how the odor of iodoform can be concealed we are obliged to say that we do not believe that any device, short of one that would decompose the drug, will succeed completely. Of the various combinations that have been proposed, there are many that have but little if any of the characteristic odor at first, but after the lapse of a short time it begins to be apparent. Coffee is as good a deodorizer for the purpose as any that we know of. Two formulæ for its use were given in our issue for August 15, 1885, p. 196.

Lectures and Addresses.

LECTURES ON
THE DIAGNOSIS AND TREATMENT OF DISEASES OF THE CHEST.

DELIVERED BEFORE THE ASCLEPION CLUB,

By BENJAMIN F. WESTBROOK, M. D., Brooklyn,
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Lecture V.

(*Concluded from page 370.*)

The diagnosis, in cases where well-marked urinary disorder co-exists with cardiac disease, should concern chiefly the important question as to which is the primary and which the secondary lesion. We should consider, in the first place, the history of the case. If the patient has suffered from rheumatism, or if well-marked symptoms of cardiac disorder have existed for a long time, with only a recent history of urinary disturbance, the presumption is in favor of cardiac disease as the primary lesion. If the anasarca has begun on the insteps and about the malleoli, it is probably of cardiac origin, though some patients with renal disease have dropsy of the lower extremities, as a result of having to remain for a long time in the sitting posture, so as to breathe more easily. If, on the other hand, there is no distinct history of primary cardiac disease; if the dropsy was not limited, in its early stages, to the lower extremities, but appeared upon the face or hands; and particularly if the dropsy is too generally diffused, or out of proportion to the apparent extent of the heart lesion—the renal disease may be considered to be primary. Careful examination of the urine will also be of importance in the diagnosis.

In cardiac disease with great engorgement of the kidneys, the urine is diminished in quantity, and of high specific gravity, and contains a moderate amount of albumin. In advanced renal disorder, with secondary valvular disease and obstructed circulation, the urine is also diminished in quantity and of high specific gravity, but the albumin is much more abundant and casts of various kinds, particularly large and small granular casts, are very numerous. Then, where the more important lesion exists in the kidney, uræmic symptoms are more common.

The importance of recognizing the cardiac lesions of chronic Bright's disease and assigning them to their true origin is very great, for upon a correct appreciation of the pathology of each case will depend its successful treatment. It is not an uncommon occurrence, as I have already stated, for patients to present themselves complaining of cardiac and gastric symptoms, or of cough and dyspnœa, who have no suspicion of the true cause of their sufferings—of the widely diffused affection which is running its insidious course under the mask of certain local symptoms. The presence of cardiac hypertrophy, not due to valvular disease or over-exertion, should at once excite our suspicions and lead to a careful investigation of the arterial system and the kidneys. A sharply accentuated aortic second sound, indicating changes in the ascending arch and semilunar valves, even when the heart is not notably enlarged, is a suspicious circumstance, and, if it is not due to strain or old age, points toward general arterial and renal disease. If the cardiac lesion is associated with frequently recurring dyspnœa we should endeavor to ascertain whether there is any sufficient cause for the latter in the lungs or heart. If the lungs are not emphysematous, contracted, or otherwise disabled, and if there is no mitral stenosis or regurgitation, the dyspnœa is probably of renal origin.

Renal dyspnœa is usually spasmodic in character, though it differs essentially in its cause and outward signs from spasmodic asthma. In some instances there is no auscultatory sign of obstructed respiration. The patient feels that he is suffocating and breathes with great labor and violence, but the ear can detect nothing but the exaggeration of the normal respiratory sounds that would accompany such active efforts. I have seen such a patient, when the symptoms were most alarming, relieved within five minutes by the hypodermic injection of morphine. In other cases there is what we might call a *spasmodic œdema.* This is exemplified in the attacks suffered by the old gentleman referred to above.

The attacks come on very rapidly. The first symptoms are a slight wheezing and a short hacking cough, as at the onset of an ordinary asthmatic attack. This is accompanied by an intense blush upon the head and neck, and a feeling of shortness of breath, with palpitation. As the dyspnœa increases, the respiratory movements become more and more active, the blush changes to an intense cyanotic hue, the extremities become icy cold, a clammy sweat appears upon the surface, and the frequent cough is accompanied by the expectoration of a frothy serum tinged with blood. So intense is the dyspnœa that it required considerable persuasion to induce him to swallow a small wineglassful of liquid containing an antispasmodic and diffusible stimulant, for fear that, should he cease breathing long enough to perform a single act of deglutition, it would be fatal.

On auscultation, as already stated, some large and small mucous râles are heard, particularly at the bases, but not enough to account for the great distress. After lasting for from one to three hours, the attack subsides as rapidly as it came on. After the administration of four minims of a one-per-cent. solution of nitro-glycerin, hypodermically, and some aromatic spirits of ammonia, Hoffmann's anodyne, and digitalis by the mouth, an attack subsided within fifteen minutes, being, as far as I could judge, cut short by the antispasmodics before the digitalis had time to act. It is evidently an acute pulmonary œdema, due to some abnormal vaso-motor influence whose exact nature is unknown.

If an hypertrophied heart is irregular in its action and the sounds are reduplicated, without any other ascertainable cause, it is well to suspect renal disease. Reduplication may be a purely functional disturbance, arising from unknown causes, from general cachectic or debilitated states; or it may be due to disease of the heart itself, notably to mitral stenosis, to pathological conditions in the respiratory apparatus, or to disease of the kidneys. If neither of the other causes can be made out, suspicion will rest upon the kidney, and the investigation must be conducted accordingly. Absence of the hard pulse indicative of high arterial tension would militate against the theory of the existence of contracted kidneys; but such absence is sometimes observed in cases of parenchymatous or diffused nephritis.

Other and still more obscure diseases of the heart are found in association with angina pectoris. This subject is so difficult to treat, and the opinions of writers are so varied in regard to it, that I enter upon its consideration with great diffidence. It would appear that angina pectoris, or breast-pang, is a symptom, like dyspnœa, for instance, which accompanies several different pathological conditions. But, however different the causes to which it may owe its origin, there must be some physiological connecting link through which they all bring about the same result. The subject requires further and more exact anatomical and physiological investigation.

The most prominent variety of angina pectoris, and that which at present attracts the greatest amount of attention, is that which is due to spasm of the arterioles. The attacks come on suddenly with intense præcordial pain, and frequently a sensation as of a great weight pressing the sternum inward toward the vertebral column. The pain extends to the scapular and acromial regions, and shoots down the left arm, which often feels numb; sometimes it extends up the side of the neck and head. Though the anxiety is intense and the feeling of impending dissolution terrible, *dyspnœa* is not at all a prominent symptom. But, in some severe cases, where unconsciousness supervenes, *apnœa*, partial or complete, is observed. The respirations sink to a very low ebb, or else entirely cease for a moment, when they begin slowly to increase in rapidity and extent until they are deep and frequent, when they fall off again till the former apnœal state is reached. This is known as the Cheyne-Stokes respiration. The surface during these attacks is pale and cool, and the radial pulse is very small and usually slow, while the slow, labored beat of the embarrassed heart may be felt at the præcordia. In one instance I have seen a blanching of the skin in patches upon the face, chest, and upper extremities. The entire surface was pale, but the patches were of a dead white, like the *digiti mortui* sometimes seen in hysterical subjects and in Reynaud's disease.

This form of angina pectoris is usually not difficult to diagnosticate unless the case is a mild one. To be positive, however, one should witness the attack and ascertain the condition of the arteries. In questioning the patient, it is well to remember that the sudden attacks of pain and distress observed in advanced cases of cardiac disease, the so-called "cardiac asthma," are associated with very well-marked dyspnœa, even orthopnœa, while, as I have said, dyspnœa is *not* a prominent symptom of angina pectoris.

The cardiac lesions which are most commonly associated with true or vaso-spasmodic angina pectoris are disease of the base of the aorta and the aortic valves, atheroma of the coronary arteries, and fatty degeneration. They are degenerative changes, and whether the angina pectoris is really caused by them, or whether both are not rather due to some obscure cause affecting the ganglia of the cardiac plexuses, we can not say. It is not improbable that, as maintained by Fothergill and others, the gouty dyscrasia bears a causal relation both to the cardiac and vascular lesions and to the vaso-motor spasm.

The lesions may be so slight as to elude detection, but a careful examination will frequently be rewarded by the discovery of some abnormity about the origin of the aorta. Thus, in a patient who recently died in St. Mary's Hospital, though the heart was not hypertrophied, the aortic second sound was so altered in its intensity as to enable us to recognize the presence of changes in the valve-cusps. Such changes—viz., a thickening and slight deformity of the valves without hypertrophy or other cardiac disease—in one who is in the degenerative period of life, may safely be said to be associated with atheroma of the ascending arch.

Disease of the coronary arteries could not be certainly diagnosticated, but, if the aortic arch were atheromatous and the valves affected, the openings of the coronary vessels would scarcely escape. In the case referred to, their diameter at their points of emergence, was reduced more than one half.

If the valve is so far diseased as to give rise to stenosis or regurgitation, the diagnosis is, of course, much easier. The diagnosis of fatty degeneration of the heart will be considered farther on. The advantage in arriving at a correct estimate of the condition of the heart and aorta in cases of angina pectoris is that it enables us to prognosticate with a little more security than would otherwise attend our efforts in that direction. If grave structural lesions are found, the individual attacks are more dangerous and the duration of life will be shorter than where the structural changes are less pronounced. Of course, a degenerative change in the walls of the coronary arteries, though of slight absolute extent, may be of great relative importance, owing to the small caliber of the tubes.

Other forms of angina pectoris are met with in association with valvular diseases and dilatation of the cavities of the heart. The paroxysms may be equally severe and dangerous, but the vascular spasm and stenocardia do not prevail. The cavities are over-distended, but the pulse may be soft and rapid, or irregular. In some forms, probably of pseudo-angina, the pulse is little if at all affected. The whole subject is at present somewhat obscure, but it will probably be more fully elucidated in the future.

What we should look for, in examining a patient suffering from this disease, is something to treat. We should carefully investigate the circulatory, digestive, and excretory functions, so as to be able to correct every abnormal condition that is susceptible of treatment. The primary assimilation is very important, for in many instances angina pectoris appears to be due to malnutrition of one kind or another. The excretory organs, especially the kidneys, should also be carefully examined for any deviations which may be amenable to treatment. This collateral diagnosis should never be neglected, as we can do more by attention to complicating or exciting disturbances than by attempts at direct treatment of the cardiac or aortic lesions. As in heart diseases generally, so in the one we are now considering, a disordered stomach, with irritation of the mucous membrane or gaseous distension, is one of the most frequent and important disturbing factors, and success in treatment is unattainable unless the digestive apparatus can be maintained in an approximately normal condition.

The last of the obscure cardiac conditions to which I shall call your attention is *fatty degeneration.* Its diagnosis is almost always difficult and frequently impossible. There are, however, some points which may be of use in making our examinations. We will consider, first, the signs and symptoms connected with the heart itself; and, second, those observed in the body at large.

We will consider them as they occur in well-advanced cases, as the diagnosis of this lesion is impossible until it becomes well pronounced. The area of cardiac dullness is not increased, or the apex-beat displaced, unless there is, besides the degeneration, a deposit of subpericardial fat extending between the muscular bundles and fibers. If the patient has emphysematous degeneration of the lungs, calcified costal cartilages, and the expanded thorax of advancing age, the heart may give no visible or palpable sign of its presence. It is concealed beneath the dilated lung. On auscultation, the first sound is but feebly heard, and the second is not so loud as in health. This may, however, be counterfeited by the feeble transmission of the sounds of a weak but not degenerated heart. Indeed, there is more danger, in such cases, of diagnosticating fatty degeneration when it does not exist than of missing it when present. It is safer to err on that side; and when the signs are uncertain, it is undoubtedly wiser to give the patient the benefit of the doubt and treat him for the disease. The treatment can do him no harm, while a mistake in the opposite direction might be disastrous. The pulse is sometimes abnormally rapid, at other times unusually slow, frequently irregular or intermitting. *It is seldom normal in rhythm and frequency.* The abnormally slow pulse, when we find it, is highly diagnostic of this lesion. The rapid pulse may be identified with the disease by observing that there is nothing else to cause it, or that it is not a functional disturbance, because slight exercise is apt to make it irregular and occasion dyspnœa. *The irregularity is increased by exercise.* In character, the pulse is small and feeble, unless associated with chronic arterial changes, as it frequently is. And I should like here to call attention to a misleading condition of the pulse which, I believe, frequently gives rise to error in estimating its strength. In elderly people, and when the arteries have become inelastic, they do not contract well upon the blood which is passing through them. They remain partially distended and resist, by virtue of their stiffened walls, the pressure of the finger, thus giving the examiner a delusive impression of force in the pulse. This error may be avoided if we form the habit of examining the artery itself, irrespective of the pulse. It is extraordinary how strong a pulse is sometimes found with fatty degeneration. But, as a general rule, the pulse and local examination of the heart, combined, will furnish valuable evidence.

It is also important that, in connection with these local signs, we have evidences of more general circulatory disturbance. Exercise is, if the disease is at all advanced, very difficult, on account of the dyspnœa, palpitation, and even syncope induced by it.

Syncope often occurs even when the patient is quiet. A more alarming symptom of the same order is the sudden coma, suggestive of apoplexy, resulting from acute anæmia of the brain. During the attacks of syncope the Cheyne-Stokes respiration is sometimes observed. These patients are also, occasionally, subject to attacks of angina pectoris. The prognosis in that case is very gloomy. When the action of the heart is very feeble, congestion of the bases of the lungs may be found with the mucous râles characteristic of chronic bronchitis.

The general constitutional condition accompanying this form of cardiac disease is one of malnutrition. The subjects may be either fat or thin; but, if the former, the flesh is soft and flabby, the skin abnormally dry, or sometimes greasy, the abdomen relaxed, and the surface pale, or, if the cheeks have some color, dilated and tortuous vessels are seen in the skin. The digestion is weak and the urine scanty from diminished pressure in the renal glomeruli.

Those rare cases in which the health has appeared good, and the habits of the patient have been active up to the moment of sudden death from rupture of the heart, can only be explained upon the supposition that the degeneration affected one portion of the cardiac wall, either exclusively or to a greater extent than the remainder.

When the diagnosis has been made, the prognosis is to the last degree bad. Besides the invariable tendency to a fatal termination, the danger of sudden death is always present. It is, then, as I have said before, wiser, in case of uncertainty, to give the patient the benefit of the doubt, and take the same precautions as if the disease surely existed.

Original Communications.

THE VALUE OF ANTIPYRINE IN PUERPERAL FEVER.

By PAUL F. MUNDÉ, M. D.

The remarks made by several prominent obstetricians at the first meeting of the German Gynæcological Society in Munich last June, while discussing the treatment of puerperal fever, to the effect that they had abandoned the use of antipyrine in that disease, because they saw no particular or lasting benefit from it, induce me to carry out an intention formed previous to that meeting to report my experience with that remedy in a number of cases of puerperal septicæmia and peritonitis during the past two years. During this time I chanced to see quite a number of such cases in consultation, in nearly all of which I recommended the use of antipyrine to reduce the temperature, and the result was such as to lead me to look on this remedy as a great boon, far superior as an antipyretic to quinine, aconite, or even cold, which agents have hitherto been our main-stays in reducing temperature. It would seem almost useless to say that all I expect from antipyrine is its temporary antipyretic effect, and that a permanent or curative influence is not hoped for, did not the German obstetricians referred to make this want of permanency of the reduction of temperature one of their reasons for discarding it. But I can not help thinking it a poor reason for not employing a remedy simply because its effect is less permanent than we might desire when we have no better substitute at hand. In a disease like puerperal septicæmia it seems to me that *any* remedy which affords even temporary relief should be eagerly grasped, since often so little can be done in this fearful malady.

While the measures recommended by the German obstetricians—the dull curette to remove decomposing remnants of placenta and coagula, intra-uterine irrigation, cold affusions, baths, and compresses, to reduce temperature, alcohol and nourishment to maintain strength—are also those employed by us, it is well known that irrigations have but an early and limited value, and that the application of cold to a large part of the body, especially after confinement, is dangerous, and may be followed by shock and collapse, not to mention the inconvenience of such applications. For these reasons, the practical and convenient ice-water coil has been introduced, which certainly, as an antipyretic, does all that can be expected from a measure applied to so limited an area of the body as the skin of the abdomen. But even from these heat-reducing methods only a temporary result is obtained, and they require more or less frequent repetition.

What more convenient, then, than the administration of antipyrine at times, at intervals, and in doses proportionate to the return and intensity of the fever? Of course, we know that the period of comparative apyrexia which soon follows the use of the remedy is but temporary, and that perhaps soon the temperature will rise to its former height, and the remedy require to be repeated, which alternative may occur again and again for many days. But, in the intervals of comfort and freedom from fever, the exhausted system has an opportunity to recuperate by sleep and by the accumulation of the vital force which has been consumed by the fever, and we thus gain time to aid the system in throwing off the poison and weathering the disease. Surely this is not theory or fallacy, but can be and often has been demonstrated at the bedside!

What I have said applies equally to any acute inflammatory affection characterized by general rise of temperature. But I do not know whether the administration of antipyrine during puerperal septicæmia or peritonitis has become so general as the use of the remedy in internal medicine. I, for my part, certainly feel that its careful, systematic, and persistent employment has had a large share in enabling a number of the patients with puerperal fever whom I have seen in consultation to survive the disease. In making this assertion I do not undervalue the ice-water coil, or the stimulants and nutrients which were crowded into the patients almost *ad nauseam.*

The manner of administering antipyrine as to dose, repetition, and vehicle, is, I think, of prime importance, if we would secure a rapid, satisfactory, and safe effect. To give it in large doses, say 20 to 30 grains, repeated every hour or two until 60 or 90 grains have been given, is, I am sure, exceedingly hazardous. The objection has been made that the reduction of temperature may be too rapid and intense, falling even below 98°, and that collapse may occur. This is perfectly true, and I once saw the temperature fall from 104° to 96·5° F. in a hospital case of pelvic peritonitis, after two doses of 20 grains each, within three hours.

In one consultation case last winter I could find nothing to account for the temperature of 102° but a comparatively small exudation in the left broad ligament, the size of which hardly seemed to account for the sharp collapse and small pulse of 120 beats. At a loss to comprehend the cause of the collapse, I continued my inquiries, with the result of ascertaining that the attending physician, the temperature having been 105°, had given 30 grains of antipyrine in one dose shortly before my arrival. Appropriate stimulation soon brought down the pulse and relieved the collapse.

I have always followed the rule never to begin with a larger dose than 20 grains (if the patient is strong), and to follow it up with 10- or 5-grain doses every half-hour or hour until 20 grains more have been taken. Usually, and always if the patient's strength is below par, I begin with but 10 grains, and give 5 grains every half-hour until 20 more have been taken, which will make 30 grains within a little over two hours. The pulse is carefully watched, and any sign of flagging means discontinuance of the antipyrine and the use of stimulants.

This same quantity or less is ordered to be repeated as soon as the temperature (taken in the mouth, rectum, or vagina) rises above 102°. Seldom have I found it necessary to order this quantity of 30 grains in divided doses to be given more than twice in the twenty-four hours; generally but once, usually toward evening. Once, however, for over two weeks, the patient's constantly recurring rise of temperature required the daily consumption of from 60 to 90 grains, until, finally, the temperature remained down, and recovery took place.

All the patients were under the care of trained nurses, who were carefully instructed to take the temperature and pulse at regular intervals, and administer the antipyrine in strict accordance with their instructions and the effect of each dose. As soon as the temperature fell below 101°, as a rule, the remedy was discontinued. In this manner I never saw the least sign of collapse or excessive reduction of temperature (in the case above referred to the house surgeon gave the antipyrine in my absence), and can report none but the happiest results from the drug.

It was given either in solution with syrup and water, five grains to the tablespoonful, or in gelatin capsules (my favorite form), or, if the stomach was irritable, by suppositories or enema, in both of which latter forms it acted admirably. In some cases I found it necessary to give it hypodermically, which was readily feasible, as it is very soluble, one grain being dissolved in one minim of water.

In addition to the antipyrine, I always had the ice-water coil applied when the temperature rose, and removed when it fell. And I often gave five-grain doses of quinine every three to four hours if the stomach could bear it, merely for its tonic properties. But I feel convinced that the quinine had but a small, and the ice water only a moderate, share in the recovery of the patients.

Out of the twenty-eight cases of puerperal septicæmia (nineteen) and puerperal peritonitis (nine) which I have seen in consultation during the past two years, since I have been using antipyrine systematically in this disease, only three proved fatal, one of which developed chronic encysted peritonitis, to which the patient succumbed five weeks after delivery. Surely this is not a large proportion, especially when we consider that a consultant is often not called until the case becomes very serious, perhaps actually hopeless, and when I state that one of these patients was actually moribund when I saw her.

The third case I saw last April, and found absolutely intractable to remedies, each lull in the disease being speedily followed by a fresh accession of septic infection more violent than the preceding one.

I do not deny that I always expect a more lasting effect from the antipyrine and other similar remedies in the cases where the local inflammation predominates than when no cause for the fever can be found by an examination of the pelvic organs. And yet it has seemed to me that in precisely those pure cases of septic infection with no apparent source has the antipyretic effect of antipyrine been most grateful and satisfactory.

I will not weary the reader by detailing cases which all present the same general features. Suffice it to state that the repeated daily use of antipyrine, once or oftener in the twenty-four hours if the rise of temperature called for it, continued for days and even as long as three weeks, has, with proper precautions as to indications, doses, and mode of administration, proved in my hands a most potent symptomatic remedy, free from danger, in puerperal septicæmia.

THE DIFFERENTIATION OF PELVIC CELLULITIS.*

By JAMES R. GOFFE, M. D.

It was the almost constant remark of Dr. Emmet during my term of service at the Woman's Hospital that the next great step of progress in gynæcology lay in differentiating what was known as pelvic cellulitis, finding out the different kinds, their causes, and their treatment. This was in the winter of 1881–'82.

Much has been done in thought and in practical work in the line of inquiry Dr. Emmet so persistently marked out, although I doubt not it has taken a course quite different from what he anticipated, and may have even overstepped the bounds that our knowledge of the pathology of pelvic inflammations would then have justified. It may not be uninteresting nor unprofitable, therefore, to consider the subject of pelvic inflammation from the standpoint I have chosen, and see into what the broad term pelvic cellulitis resolves itself—if indeed it does not, as a prominent factor in gynæcological cases, resolve itself out of existence.

It was the custom at the Woman's Hospital, at the time of which I speak, as soon as a patient was found to be at all sensitive upon digital touch, to refrain from further investigation, to diagnosticate cellulitis, and to place her at once upon hot-water treatment, with occasional applications of tincture of iodine and tentative efforts from time to time to locate the seat of the trouble more definitely. Lacerations of the cervix and perinæum, ovarian and fibroid tumors, displacements of the uterus, and prolapsed and cystic ovaries, were the features to be kept in mind, with the bugbear cellulitis to complicate most of the cases and debar from further inquiry.

The first break in this uniformity came through Lawson Tait in his recognition of salpingitis and his radical cure by the operation which bears his name. The pathology of salpingitis, its symptoms and signs, have been so recently and so fully discussed in all quarters that I need not dwell upon the subject. The recognition of the condition was the first advance in the direction Dr. Emmet had indicated, "the first ray of light in the cloud of ignorance and uncertainty" that was cloaked by the name cellulitis. And this has the distinction not only of being the first step, but a most decided advance, and, as Dr. Thomas has said, marks a new era in the development of gynæcology.

Following this famous essay of Lawson Tait's, which appeared in July, 1882, came the last edition of Courty's work on the uterus, ovaries, and Fallopian tubes, in the summer of 1883. In this work M. Courty describes a condition which had formerly come under the broad title of cellulitis, and which he calls peri-uterine adenitis and angeioleucitis, an inflammation of the lymphatic vessels and glands in the vicinity of the uterus. The author describes this inflammation as often acute, and the prognosis very serious when it is puerperal. "More frequently it is chronic, and is then less important in itself than the ulceration of the uterine mucous membrane, of which it is the certain sign." The condition is characterized by small, rounded, indurated tumors behind and to the side of the uterus, with great sensitiveness upon digital touch at the seat of the indurated glands and in the surrounding tissues, extending even to the walls and floor of the pelvis. "The mobility of the uterus is scarcely altered, but movement of the uterus gives pain." The most characteristic of the symptoms attending it are "lumbar and lumbo-sacral pain, sometimes extending to the anus, and persistence of pain upon marital intercourse, even after most of the uterine symptoms have disappeared."

Here, then, is presented a condition the recognition of which is of the greatest importance, for its relief and cure depend not upon the non-interference plan of cellulitis, but upon a most active treatment of the interior of the uterus, which is the origin and constant source of irritation of the lymphatic inflammation.

An ulcerative stomatitis is attended by enlargement of the neighboring glands; an eczema of the scalp produces an adenitis of the post-cervical ganglia. This adenitis may run on to suppuration, and, although secondary to the pus-secreting surface of mucous membrane or scalp, eventually proves the more refractory to treatment. As long as the original pathological condition exists, however, it acts as a constant irritation to the lymphatic system, and treatment is at once directed to the original lesion. Analogy certainly holds good in the pelvis; treatment should be applied to the mucous membrane from which the absorption takes place—viz., the interior of the uterus.

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* Read before the Alumni Association of the Woman's Hospital at its second meeting.

Dr. Mundé has reported three cases in which he diagnosticated the condition of lymphadenitis and cured it by intra-uterine applications. I recognize this condition occasionally in dispensary cases, and am able to relieve it by the same treatment.

I have the notes of two cases occurring in my private practice, and, as this condition has not been much discussed, I will report them here:

Mrs. L., aged thirty-four, married four years; children, none; miscarriages, two, artificially induced. This patient came to me in May, 1884, complaining of sickness since her last miscarriage, two years before, consisting of pain across the lumbo-sacral region and down the thighs; nausea at times, and so great soreness in the pelvis that she could neither walk nor ride; the jar of the horse-cars was unendurable, so that she was obliged to stop the car sometimes when she had ventured into it, and get out without completing her journey. Menstruation occurred every four weeks. The flow was profuse, lasting from four to five days. There was intermittent leucorrhœa; micturition was difficult and painful, and the bowels were constipated.

Examination disclosed the uterus in the normal position, but large and exquisitely sensitive to touch and movement. On the posterior surface of the uterus, and reaching out on either side, were small, nodular, sensitive masses of the size of a pea, with great sensitiveness in the deep tissues on all sides of the pelvis, even down to its floor. I recognized the condition as that of lymphadenitis, and proceeded to dilate the cervix with a steel dilator and make a thorough application of pure carbolic acid to the endometrium. This treatment was repeated five or six times, at intervals varying from three days at first to a week at the last. The patient then declared herself so well that she would not come again, although the indurated glands had not entirely disappeared. I have seen her repeatedly since, and find her walking and doing her work with perfect comfort. I neglected to state that upon my first dilatation an abundant milky discharge came pouring out of the uterus, showing that the secretions had been retained, were acting as an irritant, and required opening of the canal to give them proper escape.

The second case is similar to this in all its main features, and the patient was relieved by the same treatment, but I have never been able to induce her to come for treatment continuously at any time long enough to cure her. Her husband has had syphilis, and, although the patient has escaped it, she has had two syphilitic children and as many miscarriages. She is in constant fear and dread of becoming pregnant, and I mistrust is constantly interfering with herself. From this cause there is established the pathological condition I have described, which is clearly susceptible of diagnosis and, as I believe, of cure.

Thus far, then, we are able to differentiate two varieties, so to speak, of cellulitis—viz., salpingitis and lymphadenitis—not theoretically or pathologically simply, for that had been done long ago—but clinically and practically, and in a manner that implies its treatment and cure.

The small indurations and thickenings that are felt about the uterus upon digital touch, Dr. Welch believes, are due, in the vast majority of cases, to peritonitis, although he does not deny that there may be cases in which they are in the cellular tissue. Dr. Coe, in his carefully conducted investigations, found that they could not in any case be ascribed to the areolar tissue, while a number of prominent laparotomists of the city, who have had an eye to the settlement of this question by careful examinations after the abdominal cavity has been opened, likewise find the cellular tissue an innocent victim of most foul accusations.

Large inflammatory tumors of the pelvis—that fill the cavity or extend even above it—if they come to autopsy, are found to be due to plastic inflammation of the peritonæum, agglutinating together the uterus, its appendages, and large masses of intestines—involving sometimes even the omentum. If the inflammations clear up, there has simply been a plastic peritonitis with or without bands of adhesion following in its train. If the inflammation runs on to suppuration, an abscess forms.

And this brings us to the subject of pelvic abscess. A pelvic abscess is an accumulation of pus in the pelvis; but the more exact location of the pus—whether it is confined to the areolar tissue, being thus without the peritoneal cavity, or whether it is entirely within the peritoneal cavity, being confined by adhesions between the peritoneal surfaces—has divided students of the subject into two factions. The original idea of inflammatory tumors of the pelvis, especially when they run on to suppuration, seems to have been that they were confined to the areolar tissue. The principal advocates of this theory have been Nonat in France, Sir J. Y. Simpson and Graily Hewitt in England, and Dr. Emmet in our own country.

The first departure from this theory was made by the combined efforts of Bernutz and Goupil, in France. They scouted the idea of a pelvic cellulitis, maintaining there was not enough cellular tissue in the pelvis to produce a formidable tumor, and that all accumulations of pus of any magnitude were within the peritoneal cavity. They based their arguments entirely upon autopsies. Matthews Duncan, while not indorsing entirely the position of Bernutz and Goupil, advocates the theory of the intra-peritoneal accumulation of pus. But no writer of prominence in this country entertains the notion of pus being tolerated in the peritoneal cavity. The only clear statement of such a condition by any author in this country which I can find was pronounced by Professor Byford before the American Gynæcological Society in Philadelphia, although he also states that abscess may be formed in the areolar tissue. He says: "Collections of pus in the pelvis are found in the connective tissue of that cavity in many localities. Abscesses, however, are not confined to the connective tissue. They are found in the peritoneal *cul-de-sac* behind the uterus, and in the substance of the uterus and ovaries."

I was reared medically in the notion that the peritonæum was utterly intolerant of a foreign body, that the presence of pus within the peritoneal cavity meant certain death, and that of course an accumulation of pus in the pelvis could not possibly be anywhere but in the areolar tissue. But, after standing at the elbow of Dr. Welch as he made successive autopsies on patients who had died of cellulitis and peritonitis, and looking in vain for tumors in the cellular tissue of the pelvis, I was greatly astonished by the statement of Dr. Welch that in his experience it was rare and exceptional to find such a condition. That we may have the exact opinion of Dr. Welch, I will quote from a recent letter of his upon this subject:

> "I do not wish to be understood as altogether denying the occurrence of inflammatory exudations primarily into the pelvic connective tissue; I do, however, believe that the frequency of such primary exudations is greatly exaggerated, and it certainly has been my experience to find that the vast majority of cases which have been diagnosticated before death as cases of parametritis or pelvic cellulitis have proved, if they came to autopsy, to be cases of circumscribed exudations into the pelvic peritoneal cavity (pelvic peritonitis). I am led to believe that the various hardenings and tumefactions which, when felt near the uterus, are often considered evidences of pelvic cellulitis, acute or chronic, are in most cases due to acute or chronic pelvic peritonitis. Undoubtedly in many puerperal cases the inflammation starts in the connective tissue adjoining the uterus; but here the peritonæum rapidly becomes affected, and its involvement often plays the leading rôle in the subsequent pathological processes.
>
> "I have made post-mortem examinations upon cases of abscess in the subperitoneal connective tissue of the pelvis. These abscesses have been due to such causes as diseased bone, cancer, and inflammation of the rectum, of the bladder, and of the uterus, surgical operations, and traumatisms. In only a minority of the cases could they be considered as of any gynæcological interest."

I have seen accumulations of pus on autopsy in the pelvis within the peritoneal cavity, and even in successive locules, reaching up as far as the lower surface of the liver. And in one case, the notes of which I have, a nest of fæcal matter as large as an English walnut was found above the brim of the true pelvis, shut in on all sides by adhesions of intestines. An opening in the wall of the small intestine showed the source of its contents, and a tortuous canal, formed by adhesions among the intestines, led down into the bladder, through which an exit was found. This condition had existed for months, and was not the immediate cause of death. I cite this case to show that foreign material, even of the most irritating character, when discharged into the peritoneal cavity, may be tolerated by that membrane.

M. Forget, of Strassburg, gives a report of the autopsy of a woman who died of cancer of the uterus. She had seven years previously been believed to have ovarian dropsy, and had been tapped four times. "On opening the abdomen post mortem there was found at the supposed site of the ovarian cyst an ovoid cavity containing a large quantity of yellow serosity. This cavity was formed anteriorly by the great omentum, thickened and adherent to the anterior wall of the abdomen; posteriorly by a mass of small intestines adhering together and covered by false membranes; inferiorly by the uterus and ovaries reduced to a putrilage." The ovary or tube was evidently the origin and center of this accumulation, and it was entirely within the peritoneal cavity. But well-established cases of pelvic abscesses in which the collections of pus were within the peritoneal cavity, as proved by autopsy, are numerous and need not be multiplied here.

Aran (quoted by Duncan) describes these tumors in the following words:

> "If we set about with care the dissection of the tumor, we find, proceeding from without inward, that it is constituted of false membranes, still soft and pretty easily torn, forming a layer more or less thick, sometimes quite continuous, at others hollowed out here and there by locules full of a liquid, sometimes sero-purulent or perhaps true pus. In the center of the tumor we find one or both appendages of the uterus—*i. e.*, ovary and tube."

Such, then, are the pelvic abscesses—acute or chronic—which we meet with from time to time, not in the cellular tissue, but within the peritoneal cavity, and the original cause of the abscess just what Aran found in the center of the cavity—viz., the ovary and tube, one or both. In this statement I confine my cases to those of strictly gynæcological interest, excluding the puerperal condition.

The pelvis in all its pathological processes bears a striking analogy to the pleural cavity, with the exception that it has the additional circumstance of having the ovary and tube as exciting causes. In the chest we have a simple serous exudation, giving us hydrothorax; in the pelvis the same process gives us serous peritonitis; in the chest the inflammatory process may go on to plastic exudation and organization into pleuritic adhesions; in the pelvis the same process gives the omnipresent peritonitic adhesions; in the chest the exudate may break down into a pyothorax and the pleura be transformed into a pus-secreting surface; in the pelvis the same process gives purulent peritonitis or abscess; and the pus-secreting surface into which the peritonæum is transformed occasions the interminable difficulty that is experienced in obliterating these cavities.

But must we conclude that all pelvic abscesses of gynæcological interest are wholly within the peritoneal cavity? Bernutz declares that undoubted post-mortem proof of phlegmon in the cellular tissue about the uterus has never yet been adduced. I do not find any descriptions of such a condition, nor have I seen it. But I can readily understand how a pathologist, with the preconceived exaggerated notion of the sensitiveness of the peritonæum and its intolerance of a foreign substance that formerly held sway, might believe, when in the course of his autopsy he reached and went through the adventitious membranes which shut in the pus, that he had reached the bottom of the peritoneal cavity and discovered the pus in tissues beneath, and therefore describe it as in the areolar tissue.

I do not consider this question settled by any means, but the settlement of it seems to be inclining strongly to the intra-peritoneal theory.

To sum up briefly the points of my paper: Cellulitis has been dethroned from the prominent position it has held in uterine pathology and as a serious complication in gynæcological cases. In its place have come salpingitis and peri-salpingitis, oophoritis and perioophoritis, lymphadenitis, and peritonitic bands and adhesions. That cellulitis does occur I am not prepared to deny. It may indeed be present in all pelvic inflammations, but, if so, it is acute in its nature and comparatively harmless in its action, for it leaves no scars in its train. These conclusions are not based upon autopsies alone; clinical experience is accredited its right to judgment. But clinical experience in this matter has been transferred from the uncertain test of digital touch and bimanual manipulation to the crucial test of laparotomy.

If, then, the pathological processes of the pelvic serous membrane found upon autopsy and laparotomy will account for all the pathological conditions formerly attributed to cellulitis, while inflammation of the areolar tissue of the pelvis has only slight confirmation upon autopsy or laparotomy, the balance certainly swings strongly to the former. And, in dealing with inflammatory affections of the pelvis, we must bear in mind that the highest probability is that the tissue involved is a serous membrane.

TEN MONTHS' EXPERIENCE WITH PNEUMATIC DIFFERENTIATION.

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(*Concluded from page 373.*)

Case III.—July 6, 1886. Mr. J., aged thirty-five, gas machinist; family history negative; patient believes his mother died of consumption; formerly strong and well; four years ago had what was called "slow fever"; has had much trouble with his stomach, unable to digest food, and often obliged to vomit it; had a cough all through the preceding winter; in March got chilled in a cold house; confined to bed three weeks, with almost constant vomiting; cough increased with copious, darkish sputa, then whitish, once streaked with blood; pain in left side occasionally; at first night-sweats; dyspnœa; loss of strength and flesh; chief complaint is of cough and gastric symptoms.

Physical Examination.—Patient does not look very ill; no emaciation; face florid, rather tired expression; percussion note dull at right apex. Auscultation reveals a "crumple" in the right apex; voice nearer in this region; in the upper right back, a slight "crumple"; at left apex about spine of scapula somewhat prolonged expiration; no râle; temperature 100·1°; pulse 106; bacilli found in moderate quantity in sputa.

Diagnosis.—Pulmonary tuberculosis. Examined by Dr. H. I. Bowditch, and grave prognosis given. Churchill's compound syrup of hypophosphites and a cough syrup were ordered. August 5th, one month later, no improvement was noticed, the gastric symptoms being very troublesome and not relieved by remedies used. The physical signs in the right side slowly increased, and about five or six weeks later an occasional râle could be heard in the upper part of the left chest. The cough increased. Pleuritic pains in the left side appeared, and on October 5th dullness was noticed below the third rib on the left side, and moist râles could be heard throughout the left side, most marked at the top, and respiration in the upper right chest was somewhat bronchial, with prolonged expiration. The patient was very much thinner and weaker. I advised discontinuance of treatment, feeling that it was of no benefit. Patient took thirty-two sittings in all, omitting one occasionally. Iodine and pine extract chiefly used in the spray.

Synopsis of Case.—Pulmonary tuberculosis; treatment given thirty-two times.

Result.—No benefit from the use of the cabinet.

Case IV.—July 7, 1885. Sent to me from Dr. J. S. Greene, of Milton. Miss D., aged twenty-one, mill hand; father died suddenly; asthmatic; mother and four sisters all healthy; no history of lung trouble in family. Patient never robust. Has had cough for eight years, varying in intensity, with yellowish sputa occasionally streaked with blood. Cough became worse last autumn, with occasional pain in left chest. Palpitation at times. Feverish and chilly occasionally. Night sweats six months ago. Loss of flesh and strength in the last year. Easily fatigued. Appetite poor. Bowels regular. Menses regular. Obliged to give up work on account of weakness.

Physical Examination.—General aspect, rather thin. Right clavicle more prominent than left. Percussion-note dull, inelastic at upper left, most marked at apex. Auscultation reveals numerous coarse and fine râles in the upper left chest, with prolonged expiration; fine râles most marked above clavicle. Slight "crumple" in upper right as far as second rib. Voice nearer on left. In the back a "crumple" heard in upper third of left side. Heart's action very rapid. Marked blowing diastolic murmur heard most distinctly at third left intercostal space, near sternum. Pulse 138, temperature 102·8°.

Diagnosis.—Phthisis, probably tubercular. Prognosis bad.

Owing to the cardiac murmur, the treatment was used very cautiously for the first few times, 0·2 to 0·4 inch depression being used only at first, with iodine and pine-extract spray; later the pressure was increased to 0·8 and to 1 inch without the least difficulty three times a week, the patient being obliged to take a long journey in the horse-cars from her home each time.

After seven treatments the patient felt very much better. The cough diminished, appetite improved, and the general strength increased, so that the journey, which caused great fatigue at first, was borne quite comfortably.

August 6th.—One month after first visit physical examination showed a marked diminution in the number of coarse râles on both sides, the finer râles still persisting. General condition much improved; patient much stronger, although a loss of two pounds of flesh was noticed. Temperature 100°, pulse 110.

September 21st.—Still marked improvement, although a loss of four pounds of flesh was noticed since first visit. Dr. Greene wrote: "I do not see how the changes in her physical signs can be interpreted otherwise than very favorably. I remark now but very slight signs of irritation in the left lung, where such signs were plentiful when you began treatment. In that respect the improvement is very remarkable, and it corresponds to an almost complete disappearance of febrile temperature. . . . I observe she has lost weight, but her looks show improved health, and she says she feels very well."

December 15th.—Improvement continues. Has gained six pounds since September 21st. Once or twice has expectorated small quantities of blood.

February 25th.—Continued coming in town all winter to the cabinet, and, with the exception of a temporary gastric disturbance for a week or ten days, and occasional spitting of blood, has felt nicely. Occasional examinations of the chest revealed no marked change in the physical signs, except the disappearance of the prominence of the right clavicle. The morning and evening temperature, as shown by a chart during this time, was almost always normal, only a slight rise being occasionally noticed. Late in the afternoon of this date patient had a slight hæmorrhage, and two days later another. Did not come in for treatment from this time until April 10th, on account of three or four slight hæmorrhages. Lost three pounds in weight, and cough increased. Examination of chest showed again no marked change, except the "crumpling" noticed before in left back extended possibly a little farther down.

Since April 10th the patient has resumed treatment, and notices the beneficial effect of it again in increased strength. The only tonic medicines given were at first bovinine, and afterward Fellows's hypophosphites; but during the winter for nearly a month was taking no medicine at all. Is now taking tincture of chloride of iron.

Examinations for bacilli in the sputa at various times revealed very few, or none at all.

Iodine, with pine extract, was used for inhaling for the first two months; later, for three months, phenyl, and from December 29th to February 25th camphor-water and creasote (℥ j–gtt. x). Lately only camphor-water has been used.

Synopsis of Case.—Chronic tuberculosis of both lungs of several years' standing.

Result.—Very marked improvement for six months. Increase of symptoms upon omitting treatment for a month. Improvement with renewal of treatment up to present time.

CASE V was one of incipient phthisis, with a sharp attack of bronchitis, in a poor woman living in a dispensary district. Bacilli in small quantities were found in sputa. Patient only took four treatments, and then ceased to come. Four months later was seen, and the disease had evidently advanced rapidly. No effect was noticed in the four treatments given with iodine and pine extract.

CASE VI.—June 9, 1885. Mrs. B., aged twenty-seven. Advised by Dr. H. I. Bowditch to try the cabinet as a last resort. Family history excellent. The personal history was the usual one of phthisis, dating back eight or ten years, with slowly increasing symptoms. Loss of voice for five or six months previous to first visit. Night-sweats, harassing cough, copious sputa (occasionally bloody), and dyspnœa were the chief symptoms complained of.

Physical Examination.—Pale, pinched face. Emaciation. Increased vocal fremitus at right apex. Decided dullness in upper right. Resonance less than normal in upper left. Prolonged expiration at upper right, rather bronchial respiration, and bronchophony with "crumpling," and an occasional sonorous râle throughout right chest. In upper part of left a "crumple" after cough and full inspiration, with occasional sonorous râle. In the back about the same. Pulse 114, temperature 99·6°.

Diagnosis.—Advanced phthisis, probably tubercular. Prognosis very bad.

Fusel-oil (gtt. v, t. i. d.) was ordered.

After the third treatment in the cabinet there was "decided improvement in breathing." After the tenth treatment (three weeks later) patient felt much stronger and better generally, and one month after first visit both the patient and her husband noticed marked increase in strength, improvement in appetite, less cough and expectoration, less fatigue in talking.

September 24th.—Examination showed the dullness at the right apex to be less marked than before, and the whole character of the respiration on this side was drier and freer than before. From this time on the patient continued to come into town from Wellesley Hills, about twelve miles from the city, and was always convinced of the beneficial effect of the cabinet in relieving her of any sense of oppression in the chest. Her strength gradually failed, however, and about the middle of January she suffered severely from sore throat, and the inability to swallow food caused rapid loss of flesh and strength. One inhalation of camphor and creasote gave great relief, and there has been no return of the sore throat since that time.

About February 1st the patient suddenly was able to speak aloud, and not in a whisper as before, although still hoarse. No special change noticed in the larynx. The last physical examination was made February 24th. Percussion revealed nothing new. The respiration in the right apex down to the second rib was harsh, bronchial, and dry, with scarcely any râle. Bronchophony. Below this an occasional dry "click" was noticed. In the left apex a dry "crumple" was heard, rather increased after cough. In both apices behind the same signs, but less marked than in front, were noticed—all of which seemed to indicate a less active process going on in the lungs. The temperature chart during January and February showed a less febrile condition than before. Both my father and I felt pleased with the result when considering the condition of the patient nine months previously. Soon after this the patient's strength failed rapidly, the cough and expectoration increased, and at last accounts she was unable to leave her bed. The patient had about sixty-five sittings up to March 17th, which was the last time she was able to come. Iodine with pine extract, phenyl, camphor with creasote, were the inhalations chiefly used. Examination of the sputa at different times showed the presence of bacilli in varying quantities, from none at all to many.

Synopsis of Case.—Chronic tubercular disease of both lungs of many years' standing, in the last stages. Treatment given sixty-five times.

Result.—Great alleviation of most distressing symptoms for nine or ten months.

CASE VII.—July 11, 1885. Mrs. M., aged twenty-eight; dispensary case; married four months; family history generally good; great-grandfather died of consumption.

About six weeks before first visit began to cough after severe hoarseness; yellow, copious sputa; no blood; pain between shoulder-blades; vomiting; no special fever; night-sweats; anorexia; bowels regular; menses regular; sleep destroyed by harassing cough; much loss of flesh and strength; feels very miserable.

Physical Examination.—Patient does not look ill, but tired. Increased vocal fremitus in right apex. No dullness in front or back.

Auscultation reveals "crumpling" down to second or third rib in right apex; voice a little nearer. In upper right back, just above spine of scapula, expiratory murmur prolonged; a little tubular in character. No râle. Pulse, 94; temperature, 99·2°.

Examination of sputa reveals numerous bacilli.

Diagnosis. — Acute pulmonary tuberculosis with general bronchitis. Prognosis grave.

July 1st.—Sonorous râles were heard in both lower backs, and percussion-note in right apex behind was slightly higher in pitch.

Patient took twelve sittings in two weeks and a half. After the first she "slept better than for three weeks previously," and at the end of the week felt much better. Had severe fits of coughing at times, however, and sputa became bloody. After July 30th (two and a half weeks from first visit) the patient did not come again, and three days after the last treatment, after violent coughing, expectorated a large quantity of blood. Great weakness followed. Later the patient moved from town, and is now in a home with marked signs of phthisis, although stronger again.

Patient tried cod-liver oil, bovinine, and quinine at different times.

Synopsis of Case.—Acute tubercular disease of right lung.

Result.—Slight temporary benefit from twelve sittings.

CASE VIII.—July 16, 1885. Mr. N., aged twenty-five, grocer. (Transferred to me by Dr. H. I. Bowditch.) Family history perfectly good; personal history, usually well and strong until the middle of May, 1884 (fifteen months ago), when he had two or three heavy colds with cough in succession. At the end of two weeks had a chill with fever; worked until June 16, 1884, when a very slight hæmorrhage from the lungs occurred. Was in Florida from October, 1884, until the May following. Cough was benefited, but patient acquired dysentery and malarial fever, and has had more or less diarrhœa since. No real pain in chest, but at times a "crumpling feeling" in left chest. Night-sweats; loss of flesh and strength; dyspnœa at times; occasional chills; no marked feverishness; appetite poor; vomits occasionally; more or less diarrhœa; no trouble with water; has done no work for a year; chief complaint is of cough, diarrhœa, and general weakness.

Physical Examination.—Decided emaciation of face and body; languid manner; slightly increased vocal fremitus in right apex.

Percussion-note slightly dull and inelastic in right apex and in right back; somewhat high in pitch. Auscultation reveals an indistinct "crumple" in right apex, although vesicular murmur can be heard also. Signs more marked toward the lower part and in axillary region. On the left front, about the second or third rib, murmur vesicular, and once or twice a "click" heard. In both lower backs and in the upper right a squeaking sound with inspiration. No marked bronchophony, but voice sounds nearer in right apex in front. Temperature, 100·3°; pulse, 120; expansion of chest, 30 to 31½ inches. Sputa examined once for bacilli and none were found.

Diagnosis.—Phthisis, probably tubercular. Prognosis bad.

The patient lived forty miles out of Boston, and was obliged to take a fatiguing carriage and railroad trip three times a week.

Five sittings, with iodine and pine-extract inhalations, were given in the cabinet from July 16th to August 1st, and for a week I saw nothing of him, and I supposed the treatment was not satisfactory, as he seemed to think the cough had increased, and he complained of fullness in the head. On August 1st he appeared looking much better, and expressing himself as much encouraged. Since the last visit had coughed and raised very much less, and the diarrhœa ceased. A sharp pain near the left nipple prevented him from making the journey for a week, but, apart from this, patient felt much better. Examination of the chest showed a distinct friction-sound near the left nipple, but the sonorous râles noticed before in both backs had entirely disappeared. Temperature, 99·2°; pulse, 100.

From August 1st to August 24th the patient appeared only three times, and wrote that after visit on August 6th he had a chill and fever with increased cough, "which was always the case when malarial attacks appeared." On the 19th the diarrhœa had begun again with consequent prostration.

August 24th.—A one-grain opium pill was ordered, and as a tonic a mixture of Fowler's solution and Fellows's syrup of hypophosphites in the proportion of three drops to one teaspoonful.

September 21st.—The patient wrote that he had been in the White Mountains and had improved wonderfully. Gain of strength and flesh. No chills nor bowel disturbance since he began the medicine.

25th.—Returned, feeling nicely. Cough about the same, but expectorates freely. No pain in chest. No diarrhœa. Examination of chest showed a slight "crumpling" near left nipple, and in the lower right back slight dullness, and respiration rather fainter here than on left. Otherwise, signs about as before. Power of expansion about the same.

28th.—Patient came saying that since the last treatment he had had almost constant headache, dizziness, vomiting, loss of appetite, and once a slight return of diarrhœa. I ordered the medicines discontinued, and since then have not seen the patient; but on October 6th he wrote that his friends wished him to go to Colorado, although I advised his coming nearer to Boston in order to take the treatment more regularly without the fatigue of a long journey.

Patient took ten treatments at irregular intervals, with iodine and pine extract for inhalation at every sitting except the last, when phenyl was used.

Synopsis of Case.—Phthisis, probably tubercular. Seat of disease: right lung chiefly and a circumscribed space in left. Complications: attacks of chills, followed by fever of probable malarial origin. Diarrhœa.

Result.—Marked benefit at first under unfavorable conditions for treatment, although fullness of head after treatment was complained of often. At the last sitting, questionable injurious effect of treatment, which was given ten times in two months and a half.

Case IX.—July 18, 1885. Mr. M., aged eighteen, clerk. (Transferred to me by Dr. H. I. Bowditch.) Family history excellent. Personal history: always well until September, 1884, when he had a slight cough, with yellowish sputa once or twice, slightly streaked with blood, for about a month, when the cough ceased. Was well all winter. About the middle of April cough began again and grew steadily worse. No special pain except occasionally in lower part of left chest at night; dyspnœa; loss of flesh (seventeen pounds) and strength; yellowish sputa; appetite fair; occasional distress from food; bowels not quite regular; loss of sleep from coughing; no marked fever.

Physical Examination.—Face and body rather emaciated; no special dullness in front or back; possibly the percussion-note is a little higher in upper left chest. Auscultation reveals an explosion of rather fine râles above and below both clavicles down to about second or third rib; no bronchophony; sibilant râles in both backs toward the top. Respiration pure below, although rather exaggerated. Pulse, 118; temperature, 101·4°; expansion of chest, 29 to 29¾ inches.

Diagnosis.—Phthisis; apices of both lungs affected.

Patient was advised to leave his home, a sea-shore town, and came to Wellesley Hills, near Boston; treatment was given three times a week, using iodine with pine-extract inhalation and Churchill's hypophosphites internally. The improvement in this case was wonderful. After the first treatment the cough lessened. In three weeks he had gained seven pounds; could take a long walk without the least fatigue, slept soundly all night, and looked so much better that a friend who had not seen him for three weeks was amazed at his great improvement.

August 22d.—After eighteen or nineteen treatments he had gained eleven pounds. The expansion of the chest had increased from seven eighths of an inch to an inch and a quarter; chest looked fuller and rounder; patient held himself more erect. Temperature was 99·3°; pulse 114.

September 3d.—He had gained seventeen pounds and weighed as much as he ever had before. At this time there was scarcely any cough or sputa.

23d.—No cough at all. Slight clearing of throat two or three times a day. No sputa whatever. Feels perfectly well. From the general aspect of the patient and from his account of himself, he could have been called perfectly well at this time, but several examinations at different times showed a persistence of the abnormal sounds in both lungs, and I therefore recommended his not returning home. In November there was a slight return of cough and sputa and a slight decrease in weight. Rather against my better judgment, the patient returned at the end of November to his home, where he was detained by severe weather about two weeks, and he returned looking not nearly so well, the cough and sputa having increased again. Treatment was resumed, the patient having moved to the city, and daily horseback exercise was ordered. Improvement immediately followed. The cough lessened. Up to the present time the patient has been taking treatment six days a week, and, although not so well as last summer, is much stronger than when he first returned to Boston, and has endured a very cold winter remarkably well. The temperature chart showed a decided rise in the evening during December and January, but lately has not been so high, and at one time in January slight night-sweats appeared for a short time. In March a slight pleuritic friction-sound was heard in lower right axillary region, only lasting a day or two. Sputa has been at various times slightly bloody.

Examination now reveals possible lack of elasticity in both apices. The râles noticed in apices at first examination persist, and on left chest extend possibly a little farther down. Occasional sonorous râles in lower portions of chest on each side. No bronchophony, but expiratory murmur is more marked in upper right, and voice is nearer in this region.

Churchill's hypophosphites were given for three or four months, later the compound tincture of cinchona, and about two months ago Scott's emulsion of cod-liver oil. For night-sweats, zinc and belladonna pill or aromatic sulphuric acid. Examination of sputa for bacilli at various times has shown varying quantities from none at all to a moderate number, the last two examinations showing very few.

Synopsis of Case.—Tuberculosis of both lungs. Two hundred sittings given since July 18, 1885.

Result.—Very great improvement, and cessation of nearly all morbid signs for several months. Renewal of symptoms after omitting treatment and upon returning to sea-shore climate. Subsequent improvement upon resuming treatment, which is still continued. General condition very much better than when he began. Termination doubtful.

Case X.—September 15, 1885. Mr. N., aged forty (?). (Case sent me by Dr. M. H. Richardson.) Empyema of several years' duration; a permanent opening had been made in left side many months before, and in the spring of 1885 three or four ribs had been resected in the left side with the hope of reducing the large cavity, and treatment with the cabinet was recommended in order to forcibly expand if possible the lung bound down by old adhesions. At this time respiration could not be heard at all below the spine of the left scapula. Treatment was begun three or four months after the operation, the patient coming three times a week, and at the end of six weeks the respiratory murmur could be heard by Dr. Richardson, Dr. H. I. Bowditch, and myself much more plainly in the lower left back than on the previous examination, and, although the discharge from the cavity was about the same, Dr. Richardson pronounced the cavity itself smaller. The patient felt much stronger and was desirous of keeping up the treatment, which was continued until March 12th, and at this time a very faint respiratory murmur could be heard one inch below angle of left scapula.

Treatment was not continued after this, as it was thought wiser to perform another operation later.

Synopsis of Case.—Long-standing empyema; lung held down by old adhesions.

Result.—Expansion of lung increased by use of cabinet; treatment given about four months three times a week.

Case XI.—July 29, 1885. Dispensary case. Miss W., aged thirty-seven, tailoress. Family history: *four* brothers died of consumption; father died of heart disease; mother, disease of liver. Personal history: delicate when young, but since fifteen has been well. During the winter previous to first visit had a cough for two months which entirely disappeared, but reappeared June 17th after taking cold. Grew rapidly weak, unable to walk. Cough harassing, causing loss of sleep. Sputa whitish, occasionally streaked with blood; copious. No pain nor night-sweats; feverish and chilly; dyspnœa after talking or exercise; much loss of flesh (twenty-one pounds); menses rather too frequent. Chief complaint was of cough, and loss of sleep and weakness.

Physical Examination.—Pale, looks tired and languid; slightly increased fremitus to hand in right apex. In right apex in front, slight dullness; in back in left apex, note higher pitched, slightly dull. Auscultation reveals sonorous râles throughout both chests, lasting through inspiration and expiration, front and back, but more marked in the upper left back. Just above spine of left scapula, through the sonorous râles a "crumpling" heard, and voice in this circumscribed space has a bronchial character. Temperature, 99·5°; pulse, 100; expansion of chest, 28½ to 29½ inches.

Diagnosis.—Acute bronchitis; incipient phthisis(?).

Treatment with iodine and pine extract for inhalation and iron internally was begun, and the patient still comes three or four times a week to the cabinet. The relief from the first treatment was very great, as she slept all night without coughing. She remained in St. Luke's Convalescent Home about two months, then resumed her work, and has been able to work up to the present time while taking the treatment.

The sonorous râles in both chests entirely disappeared in October (three months later), but the finer râles noticed before in the left chest, front and back, persisted, although the patient's general condition had greatly improved.

January 15, 1886.—Careful examination revealed no râle anywhere in chest, and the spot of bronchial breathing near the spine of the left scapula was replaced by pure vesicular sound, although rather more obscure than on the right side, and the voice sounded a little nearer at this point. The cough at this time amounted to almost nothing, and the patient gained in weight and looked quite rosy, and from this time to February 3d (two weeks) she declared she did not cough once.

Later a slight pleuritic pain in left side was complained of, and a very small spot in lower left axillary region was found where very fine râles could be heard after cough.

Patient has not been feeling quite so well of late, but keeps at work, coughs, and raises very little.

The last examination reveals free respiration in both sides in front of chest, although there is a suspicion of a "crumpling" heard in left apex; no dullness.

In left back near spine of scapula faint but distinct "crumple" heard also above and below this point. In right apex one or two medium râles heard.

The patient has taken at different times tonics of iron, Fellows's hypophosphites, cinchona, and has had about 160 sittings in the cabinet.

Repeated examinations of the sputa reveal varying quantities of bacilli from a good many to none, the number usually corresponding to the condition of the patient, being more numerous when the trouble seemed more active. The patient expectorated blood several times, and on April 15th raised about a quarter of a tumblerful. The temperature chart shows scarcely any rise above normal in the last two months until the last week, when it has once or twice reached 100·5°.

Synopsis of Case.—Severe bronchitis supervening in the course of tuberculosis of the left lung. Very great improvement after many discouraging symptoms, with almost complete disappearance of all morbid signs for a short period, six months after treatment was begun. Slight renewal of symptoms later. Patient still continuing treatment. Termination doubtful.

Case XII.—August 12, 1885. (Sent me by Dr. F. M. Welles, of Chelsea.) Mr. D., aged twenty. This gentleman had a phthisical history, with occasional hæmoptysis for several months, the disease being far advanced when I first saw him. Excessive cough, copious sputa, great dyspnœa upon exertion, pains in the lower left chest, loss of flesh and strength, lack of sleep from cough, and occasional epistaxis, were the chief symptoms complained of.

Physical Examination.—Inspection shows much freer movement of right side than of left during respiration. Palpation shows slightly increased fremitus in upper part of left chest. Slightly higher pitch in left chest, and in left axillary region.

about eighth rib, dullness, increasing downward to flatness, noticed. In back, flatness from one inch below spine of scapula. Auscultation revealed a "crumple" throughout left front. Absence of respiration in extreme lower part. No bronchial respiration nor bronchophony. In back, "crumpling" in upper left; absence of respiration in region of flatness. Heart in normal position. Temperature 100·4°, pulse 94. Sputa contained numerous bacilli.

Patient took twenty-nine treatments from August 12th to September 25th, and was at the time a most discouraging case, for, although the first treatment was followed by a perfect night's sleep, the first in many weeks, the patient coughed badly in the cabinet, complained of great pain in left side, excessive expectoration, vomiting, epistaxis, and seemed to be getting no benefit at all. Finally, on the 21st of September, he discontinued the treatment, and I considered it an unsuccessful case. Three months later Dr. Welles wrote me that, immediately after stopping the treatment, a very marked improvement showed itself; the cough ceased almost entirely; the sputa became thin, like mucus; the night-sweats ceased; the patient gained nine pounds in weight; he had no pain in the chest; and whereas he had been unable to go up two steps without taking breath previous to beginning the treatment, he could run up two flights without stopping; the appetite became voracious, and his general strength vastly improved. The expansion of the chest showed an increase of one inch and a quarter, and his friends, who had been most anxious to have him stop the treatment before, were now greatly pleased with it. It is reasonable to suppose that the pain arose largely from the forced expansion of the lung clogged with secretions, the removal of which and the subsequent absence of fatigue from the exercise of the cabinet caused the improvement in the general symptoms.

December 23d.—Three months after the last treatment, examination showed marked improvement in the general aspect. Much less difference in the movement of the sides. The flatness in the lower left chest had disappeared, but evidences of consolidation of the upper lobe of the left lung were present—viz., dullness, bronchial breathing, with fine dry râles, and bronchophony in the upper left chest. The patient had three or four more sittings, but, about a month ago, Dr. Welles wrote that the symptoms were increasing again, and that the patient's strength was rapidly failing. Iodine with pine extract, and corrosive-sublimate solution, 1 to 2,000, with carbolic acid, 1 to 200, were used in spray in this case. Cod-liver oil and quinine used as a tonic.

Synopsis of Case.—Advanced tubercular disease of left lung, with slight pleuritic effusion. Twenty-nine sittings in a period of about six weeks were used, in spite of very discouraging symptoms.

Result.—No benefit during treatment apparently, but immediately afterward remarkable improvement in general symptoms, lasting three or four months, with great comfort to the patient. Subsequent renewal of symptoms.

Case XIII.—August 19, 1885. Miss C., aged forty-four. No history of lung trouble in family. Patient has a history of phthisis for twenty years. Chief complaint is of cough and expectoration of copious dark-green, purulent, offensive matter. Unable to lie down long, owing to choking sensation from constant secretion. Before beginning treatment was feeling rather weak. Examination showed dullness and high-pitched note in upper left chest. Loud bubbling râles throughout the left chest, most marked at top. No râles in right chest detected. Temperature 99·2°, pulse 92.

After a month's treatment three times a week, using phenyl as a spray, the cough lessened, and the sputum, which was formerly offensive, lost its odor and was much less copious, the patient declaring that "she raised in twenty-four hours what she used to in two." Could lie down at night without feeling choked, etc.; general strength improved.

December 28th.—The patient had gained six pounds and a half in weight, and her favorable symptoms continued, although not always feeling equally comfortable. Was troubled with vertigo during the winter a good deal, which was explained by some aural difficulty, and did not seem to be connected with the use of the cabinet. Lately has not been feeling so well again, and has not come so regularly for treatment, although always asserting that it has been of great benefit to her. Repeated examinations of the sputa show an entire absence of bacilli in this case. The compound tincture of cinchona, Murdock's liquid food, and the tincture of chloride of iron are the only medicines which have been used in this case.

Synopsis of Case.—Chronic non-tubercular phthisis of left lung of twenty years' standing.

Result.—Marked amelioration of some of the most distressing symptoms.

Case XIV.—September, 1885. Miss S., aged twenty-one. Patient in Hospital of Good Samaritan.

Mother died of consumption, and one brother ill with same disease.

This case was one of marked signs of phthisis of nine or ten months' standing in both lungs. The patient did not come very regularly, but had forty-seven sittings between September and the middle of December without material benefit, except an improvement in the shortness of breath and a slight increase in strength. At one time gained three pounds and a half, possibly attributable alone to cod-liver oil which she was then taking. A single examination of the sputa failed to reveal the presence of bacilli, but I think, from the character of the case, they would have been found later. As I was unable to have full control of the case, I discouraged her coming for further treatment.

Synopsis of Case.—Well-advanced disease (probably tubercular) of both lungs. Very slight relief from excessive dyspnœa by the use of the cabinet; otherwise little benefit noticed.

Case XV.—September 25, 1885. Mrs. E. (sent me by Dr. W. E. Smith, of Framingham, Mass.), aged forty, widow. No history of pulmonary disease except the maternal grandmother and grandfather, and one aunt, who died of consumption.

Personal History.—Usually strong, but subject to severe cough for years. Fifteen years previous was thought to be in consumption, but "recovered entirely." Five years ago had what seemed like whooping-cough. Six months later had a hæmorrhage (slight), and occasional slight ones since. Bloody sputa at times during the year previous to first visit. For ten months had not been free from cough, with muco-purulent sputa. Lost eighteen pounds of flesh and much strength; more or less dyspnœa; pain not noticed; variable appetite; digestion normal; menses regular; inability to lie on left side owing to cough; chief complaint was of harassing cough and consequent loss of sleep; dyspnœa upon the least exertion, and lack of strength; had tried every kind of medication in the six months previous to first visit without the least benefit, and was thoroughly discouraged.

Physical Examination.—Patient rather thin and spare, but not looking very ill. Ribs prominent, but no marked emaciation. Increased vocal fremitus in left apex, front and back. Percussion shows resonance less than normal in both apices, and slight dullness at the upper left. In back, throughout the left side, dull compared with right.

Auscultation revealed "crumpling" heard in upper part of right and left chest. No special difference in voice. In back, "crumpling" throughout left; very marked at base. No vesicular breathing throughout left. In upper half of right back a "crumple" heard. In base, respiration free. In lower right back, where respiration is free, the voice is very distant, although no dullness there. No bronchophony. Temperature 99·3°; expansion of chest, 28–30¼ inches. Examination of sputa shows presence of numerous bacilli.

Diagnosis.—Tubercular disease of both lungs. Prognosis bad.

After five treatments, the patient declared that she felt much stronger in spite of the journey in the cars from her home twenty miles distant. From this time on, although the patient spoke of increased strength and of ability to lie on left side, which she had not been able to do for six months, the case was a most discouraging one to treat, from the constant interruptions owing to bad weather, to the presence of a spasmodic cough, and muscular rheumatism, which were always aggravated by cold weather. The patient, however, was so pleased with her gain in strength that she desired to keep on.

November 15th.—About eight weeks after first visit, Dr. Smith wrote that patient was able to walk better than for months, and that there had been a gain of about three pounds and a half in weight; increase of about half an inch in power of chest expansion.

30th.—In spite of adverse circumstances, examination showed a better percussion-note in both apices, and the respiration was freer than before, although not purely vesicular, and at end of inspiration a "crumple" was heard. Elsewhere the signs were about the same, except that the voice, in lower right back, was no longer distant to the ear as before. The same date Dr. Smith wrote of his surprise at the improvement in the physical signs, and remarked: "This is positively the first time since last April that I could say, in judging by the physical signs, there was the slightest improvement in her case."

The temperature chart from November 21st to December 10th showed a normal condition.

January 4th, 1886.—In spite of spasmodic cough and rheumatism previously, the patient reported at this date scarcely any cough or sputa. A gain in weight of four pounds and three quarters since first visit. Ability to sleep well all night. Much encouraged.

From this date to February 9th, with the exception of a heavy cold taken when trying the experiment of living in town for a few weeks, patient was feeling much better.

February 9th.—Felt rather tired before and after treatment, but went shopping, went home in damp clothes, and in the middle of the night woke with blood in her mouth and a severe pain in lower part of right chest; felt very ill. Dr. Smith was called and detected no increase in the signs in the chest until the next day, when marked symptoms of an acute pneumonia in the lower lobe of the right lung appeared, as corroborated by Dr. Adams, of Framingham, and on February 13th the patient died. Forty-five sittings were used from September 25th to February 9th. The only medicine given internally was the compound tincture of cinchona for a short time.

Phenyle, iodine with pine extract, and creasote with camphor-water, were chiefly used for inhalation.

Synopsis of Case.—Chronic tubercular disease of both lungs. Forty-five sittings given in a period of four months and a half.

Result.—In spite of most discouraging symptoms, in addition to spasmodic cough and muscular rheumatism, marked improvement in many symptoms for several months up to time of onset of acute pneumonia, which terminated in the death of the patient in four days.

Case XVI.—October 1, 1885. Miss W., aged sixteen.

Patient was a delicate girl, subject every winter to constant severe colds and coughs. Treatment was tried with the cabinet chiefly, in order to expand the chest. Patient complaining of severe coryza and oppression in chest. No dullness or râles detected in chest.

Diagnosis.—Subacute bronchitis and coryza.

Between October 1st and 12th six treatments were given. After first treatment the oppression in chest was entirely relieved, and the mother remarked at the end of treatment "that it was remarkable there had been no cough with this cold, which had always been the case before."

As the patient took the syrup of hydriodic acid as well, I can not attribute the entire benefit to the use of the cabinet, of course, but merely state it as a fact that the young girl has been almost entirely free from the heavy colds and coughs from which she has suffered for several years in the winter time.

Synopsis of Case.—Subacute bronchitis.

Relief of oppression in chest after one treatment.

Case XVII.—October 8th. Mrs. C., actress.

Patient suffering from advanced disease of left lung, and had received marked benefit from the use of the cabinet in New York when under Dr. Williams's care.

Patient took treatment October 8th and 9th, and November 3d, 4th, 5th, and 6th, with much comfort to herself, and then was obliged to leave the city.

No examination for bacilli was made.

The patient appeared again May 3, 1886, saying that she had been traveling throughout New England and New York State all winter, and her cough was much better, although her strength was not so great and her appetite was poor. Convinced, however, of the benefit of the treatment, she returned to Boston for a week for the purpose of trying the cabinet again.

Synopsis of Case.—Phthisis, probably tubercular, of three years' standing.

Amelioration of symptoms; patient returning at various times for treatment.

Case XVIII.—October 20, 1885. (Sent me by Dr. F. H. Hooper, of Boston.) Mr. C., aged thirty-one, single; drawing-teacher.

Family History.—Father living and well. Mother has always had delicate lungs and throat, and grandfather died of consumption. Patient never robust, but usually well.

About four years previous to first visit, when at the mountains, first noticed a curious wheezing noise in throat. Sore throat afterward. Since that time had cough with occasional intermissions. Sputa more or less copious; obliged to wake at night to clear throat. Once, about three weeks before first visit, sputa tinged with blood; none of these symptoms were very troublesome, and otherwise the patient complained of nothing abnormal and felt very well, but wished, if possible, to rid himself of the cough, fearing something more serious. Had been under Dr. Hooper's care for laryngeal trouble, which had improved, but, as the other trouble did not yield to various remedies, Dr. Hooper wished him to try the cabinet.

The patient looked perfectly well, with the exception of slight sallowness of complexion. Chest full, well formed.

Percussion-note revealed good resonance everywhere, possibly a little exaggerated. In the right apex behind, a little less elastic and higher pitched than on left, but not very pronounced.

Auscultation reveals in both chests in front at the end of expiration a wheezing sound, which seems more marked after cough; occasionally heard with inspiration also. Respiration more marked in apices than in the lower part of back, where it is rather indistinct. Râles not so noticeable behind as in front. No bronchial breathing nor bronchophony anywhere.

Pulse, 78; temperature, 99·3°; expansion of chest, 33½–35½ inches.

Diagnosis.—Chronic bronchitis. Prognosis favorable. Examination of sputa revealed no bacilli.

Between October 20th and December 25th the patient took about fifty-five sittings, using chiefly iodine with pine extract and a small amount of bicarbonate of sodium as a spray. At other times a solution of resorcin, with borax and phenyl. Several examinations of the chest revealed no special change in the signs, except that once or twice there seemed to be fewer râles. The cough and amount of sputa continued about the same, and the general condition about the same—that is, comparatively well.

As no special benefit was noticed from the use of the cabinet, a permanent change of climate was advised.

About the middle of January the patient came back complaining of a curious sensation in the lower right chest; a stuffed feeling, "as if he missed the cabinet." Examination showed the respiration to be freer than at any previous time, but the slight cough and sputa continued.

Soon after this the patient went to Florida. The only medicines used were Fellows's hypophosphites, and afterward, at the patient's request, Ayer's cherry pectoral; 0·6 to 0·8 inch depression of the barometer were used in this case.

Synopsis of Case.—Chronic bronchitis. Fifty-five sittings given.

Result.—No benefit from the use of cabinet. Change of climate recommended.

Case XIX.—Mr. F., aged nineteen. October 24, 1885. Severe acute bronchitis of two or three days' duration. Cough and wheezing; oppression on chest. No dullness anywhere, but sonorous and sibilant râles were abundant throughout chest. Four treatments were given. After the first, with phenyl as a spray, the cough and oppression were much relieved. After the last treatment (four days later), the examination of chest revealed only slight roughness of respiration, and two faint sonorous râles. The cough had disappeared. Five days later the patient said he felt better than for two or three months previous to the attack. Examination showed pure respiratory murmur throughout chest.

Synopsis of Case.—Acute bronchitis. Relief to cough and sense of oppression after one treatment. Cessation of cough after fourth treatment. Phenyl and resorcin with borax used, each twice.

Case XX.—Mr. Q., aged twenty-nine. November 3, 1885. Chronic bronchitis. Patient only came once, and took very short treatment. Not willing to take the journey from his home, therefore nothing further was done.

Case XXI.—November 19, 1885. Mrs. S., patient in Channing Home. Advanced tubercular disease of both lungs, with harassing cough and severe oppression of chest. Numerous bacilli in sputa. Treatment was given as an experiment to try and relieve the oppression of the chest. The patient came ten times between November 19th and December 11th, and experienced marked relief from the oppression and tickling in throat. Could expectorate more freely. Bad weather and weakness from excessive diarrhœa prevented further treatment.

Synopsis of Case.—Advanced pulmonary tuberculosis. In ten treatments, marked relief from some of the symptoms.

Case XXII.—December 12, 1885. Mr. H., aged twenty-nine. Family history shows no phthisical tendency. Patient gave phthisical history of about two years' duration. Evidences of well-advanced tubercular trouble throughout right lung, marked by dullness, non-vesicular respiration, with marked "crumpling" throughout that side. Nearness of voice in right apex in front and behind. Repeated examinations of sputa showed presence of numerous bacilli. Pulse rather rapid. Continued elevation of evening temperature, as shown by chart.

The patient had been given up by physicians, and, as he wished to try the treatment, it has been given him up to May 1st, either three or six times a week, with occasional interruptions, and, although a variety of inhalations have been used, I can not say that the least benefit has been obtained from the use of the cabinet, with the exception of an improvement in the shortness of breath during the first month.

Synopsis of Case.—Well-advanced tubercular disease of right lung. No appreciable benefit from treatment of about three months' duration.

Case XXIII.—February 10, 1886. Miss B., aged fifty-five. (Sent to me by Dr. Elbridge G. Cutler.) In father's family there was a tendency to lung trouble, but none on the mother's side. Patient subject to coughs and colds all her life. For eight years since the menopause has suffered with constant harassing cough, with copious yellow expectoration. General strength fairly good, and no marked loss of flesh. No fever. Never has asthmatic attacks. Chief complaint is of constant cough and sense of stricture across the lower part of the chest. Has tried every kind of medicine and every form of inhalation, with nothing but temporary relief in some cases, and Dr. Cutler wished her to try the cabinet.

Examinations of the sputa revealed no bacilli. Percussion of chest shows possible slight dullness at the right apex, but not marked. In lower backs a slight increase in pulmonary resonance and deep tone.

Auscultation reveals numerous sonorous and sibilant râles throughout. At the right apex, front and back, the râles are more numerous and of medium quality. Heart-sounds are normal.

Diagnosis.—Chronic bronchitis, with slight emphysema.

Prognosis.—Unfavorable for permanent cure.

For the first three weeks treatment was given six times a week, using camphor-water and creasote (℥ j-gtt. x) as an inhalation. At the end of this time the action of the cabinet was reversed, the air within being compressed instead of rarefied; but at the end of a week the rarefied air was again used, and a steam atomizer, with a spray containing benzoin, was substituted for the cold-air spray. Treatment was then given three times a week up to April 17th, after which an inhalation of "terebene" was used, the terebene being poured upon a cloth which was tied over the end of the inhaling-tube. Fougera's Iceland-moss tablets were used at first, later Blancard's iron pills, then the syrup of hydriodic acid, and, finally, terebene internally has been given (two drops on a lump of sugar three times a day), and the patient is now using terebene in a small inhaling cylinder in her home.

Great benefit can not be claimed in this case from the use of the cabinet, and yet the patient feels that she can walk rather better, that the cough is not so incessant as before, and that the sputa are less solid and more easily expectorated. She, moreover, feels that the cabinet has enabled her not to remain housed all through March, when our climate is usually at its worst. The power of taking higher pressure while in the cabinet has increased, the patient now taking from 0·4 to 0·8 inch rarefaction, while at first 0·4 was managed with difficulty. The last examination shows a diminution in the number of sonorous râles, although râles of a less coarse character can be still heard, especially in the right back and in the right apex in front.

Synopsis of Case.—Severe chronic bronchitis of eight years' duration. Cabinet used as a last resort. Fifty sittings given. Slight improvement in some of the symptoms most complained of.

Case XXIV.—March 4, 1886. Miss M., aged eighteen. Mother and one sister subject to cough, but otherwise family history excellent. Patient had been under my care for about a year for general debility, following her removal from her home in the provinces to Boston. For ten months had suffered from amenorrhœa, and occasionally from violent attacks of gastralgia, which latter symptom improved by the use of hydrochloric acid. About one month before the beginning of treatment, when much debilitated and after exposure, was seized with severe cough, with copious yellowish sputa; hoarseness; pain across the chest; fever; loss of flesh and appetite. Inability to sleep on account of cough. General feeling of malaise and discomfort.

Patient pale, with exception of bright-red spots on cheeks.

Palpation and percussion revealed at first nothing remarkable.

Auscultation showed numerous sonorous and sibilant râles everywhere, front and back, especially on left. Temperature 100°, pulse 120.

Sputa contained a few bacilli.

Inhalation of camphor-water was given in the cabinet.

After the first sitting the patient slept with scarcely any cough all night, and after the second declared she "had not been able to breathe so well for six months." After the third the cough disappeared *completely*, although there was a slight amount of expectoration for a few days longer.

After the third sitting, three days after beginning treatment, examination of the chest revealed scarcely any sonorous râles, even after cough. In the right apex in front, however, the percussion-note was slightly higher in pitch, a "crumple" could be heard with inspiration, and the voice sounded nearer. Hoarseness of voice still noticeable.

At the end of a week all expectoration ceased, and patient felt very much better. The compound tincture of cinchona was given for the appetite, and from this time on the patient steadily improved. From the fact that occasionally a sonorous râle could be faintly heard from time to time in the chest, and on account of the presence of the bacilli in the sputa, I advised continuing the treatment for four weeks, even though the "crumpling" noticed in the right apex soon disappeared.

On March 29th, about three weeks after beginning treatment, the menses, which had been absent ten months, appeared.

The patient moved out of the city, and on April 9th careful examination of the chest revealed perfect respiration everywhere, and the patient was feeling perfectly well.

The temperature, which had been rather elevated for the first three weeks, became normal, although the pulse remained rather rapid; the weight increased, the whole aspect was one of health, and the good account continues up to the present date.

Synopsis of Case.—Severe bronchitis, with incipient tuberculosis, as shown by presence of bacilli in sputa. Complete cure after eighteen sittings in four and a half weeks.

Case XXV.—March 25th. Miss B., aged thirty. This was a case of long-standing pleuritic effusion which had very slowly been absorbed, leaving the left chest-wall greatly retracted and the lung evidently drawn up toward the apex.

Treatment was tried as a means of relieving the patient from the inability to take a long breath with comfort and to see if the lung could be forced downward.

Treatment was given six times weekly for three weeks with marked benefit to the patient in her sensations. After the fourth treatment she was enabled to take a deep breath without a sense of constriction across the præcordium. Her power of walking improved steadily, and, although at first the treatment tired her a good deal, she noticed a marked improvement in her general symptoms.

The expansion of the lung was shown by increased resonance toward the lower back with very faint respiration, where formerly none could be heard, and, by the measurements of the chest, the left side showing an increase from 13¾ to 14¼ inches and the right side from 15½ to 16¼ inches.

Seventeen sittings were given, and from 0·2 to 0·7 inches rarefaction used.

Synopsis of Case.—Contraction of chest from slowly absorbing pleuritic effusion. Marked benefit from use of the cabinet. Seventeen sittings used.

Case XXVI.—April 15, 1886. Mr. H., aged eighteen. (Transferred to me by Dr. H. I. Bowditch.) This case is still under treatment, and I am as yet unable to state what the chances of permanent benefit are. A diagnosis of chronic bronchitis with asthma and slight emphysema was made at first from the presence of a tympanitic quality to the percussion-note throughout chest and back; sonorous râles, not very marked, heard in both apices without dullness or peculiarity of voice in any part of the chest, and from the presence of cough with copious sputa. The patient has been taking treatment for about two weeks, using chiefly a 1–2,000 solution of corrosive sublimate with from 0·4 to 0·5 of an inch rarefaction (that being the highest point yet reached), and the father reports improvement in strength, cough, sleep, and in the amount of the sputa.

The discovery of numerous bacilli in the sputa changes the character of the diagnosis, and it only remains for further treatment to show if still greater benefit will come from the use of the cabinet.

Synopsis of Case.—Chronic tubercular bronchitis of several years' duration. Improvement in certain symptoms in two weeks of treatment. Patient still using the cabinet.

Case XXVII.—April 20, 1886. Mrs. Q., aged twenty-seven. A case of severe cough with scanty sputa for about seven weeks; loss of flesh and strength; general debility; no marked fever; examination reveals slight dullness, with "crumpling" in lower left back and axillary region.

The case was one which could easily be considered the beginning of an acute phthisis. The examination of sputa twice shows no bacilli whatever; therefore I judge it to be a severe acute bronchitis. Ater the third treatment the patient declared herself feeling much better. The cough lessened, the soreness in left chest disappeared, and sleep improved.

Examination after the thirteenth treatment in two weeks showed a return of the normal respiration and percussion-note in the left back and axillary region, with the exception of one sonorous râle at that point. Cough scarcely noticed; appetite improved; gain of one pound in weight.

Synopsis of Case.—Severe bronchitis. Thirteen treatments given, with marked benefit after the third, and almost entire cessation of morbid signs after thirteenth treatment.

MATERNAL IMPRESSIONS ON THE FŒTUS.

By W. J. SWIFT, M. D.

Although at one time, in spite of the numerous extraordinary cases cited in support of the belief, there was a good deal of skepticism as to the probability of the fœtus being affected by impressions received by the mother, the possibility is now pretty generally admitted, and I suppose there are few physicians who have not met with one or more instances of deformity in a newly born child which has been more or less directly attributable to some shock upon the mother's nervous system.

The following case, which occurred in one of my patients, is interesting, partly owing to the late period of pregnancy in which the "impression" was received, and partly to the unquestionable relation of cause and effect:

Mrs. X. was in the last month of her second pregnancy, which had advanced thus far without event. Her son, about four years old, while playing in the stable, shut the thumb of his left hand in a carriage-door, and immediately ran to his mother shrieking with pain and holding up the injured member for her to see.

She was, of course, much affected, and was particularly impressed by the fact that the nail had turned black *immediately*, from which she inferred that the injury must have been very severe. The thumb presented the usual appearance in such cases, there being some swelling and considerable ecchymosis beneath the nail. The child was in great pain, and his mother held the thumb in her hand, bathing it for about an hour. She was for a time a little troubled lest it should be permanently disfigured, but soon ceased to worry about it.

Mrs. X. was confined on the 12th of July, a little less than three weeks after the accident above described, and the baby's right thumb presented an appearance identical with that of its brother's left thumb. Three weeks later the thumb-nails of both children came off within twenty-four hours of each other, and the thumbs have since followed the ordinary course of such an injury, in each case new and perfect nails forming and growing.

Mrs. X. says that at no time did it occur to her that there would be anything unusual produced in the baby.

To make the case complete I should add that beneath the baby's left thumb-nail there was a small ecchymosis, about as large as the head of a pin, which afterward disappeared entirely.

40 East Thirtieth Street.

The Importance of Cleanliness.—In the annual discourse before the Massachusetts Medical Society at its last annual meeting, Dr. R. M. Hodges says: "Dirty finger-nails may communicate a fatal poison, through the trivial operations of surgery which every physician undertakes to perform, or inaugurate the 'private pestilence' which still sometimes follows in the track of the obstetrician." (See page 420.)

Ether Spray in the Treatment of Strangulated Hernia.—Dr. George R. Fellows, of Moose River, Me., adds his testimony to the efficacy of refrigeration with ether spray in facilitating the reduction of strangulated hernia. He states, in a letter to us, that he has had wonderful success with it during the past two years, the hernia generally disappearing spontaneously or under very slight pressure in from one to four hours.

The Galvanic Cautery in Membranous Dysmenorrhœa.—The Paris correspondent of the "British Medical Journal" remarks that a paper was recently read at the Medical Congress, held at Nancy, by M. Paul Landowski, concerning the application of the electro-cautery to the endometrium in cases of membranous dysmenorrhœa. The author stated that it was essential that this operation should not be performed before previously dilating the uterine orifices, and, if they were sufficiently large and easily dilatable, a single application only of a prepared sponge was necessary; if, on the contrary, there should be rigidity of the orifices, the sponge must be applied twice—once in the evening, and again the following morning. It was on removing the sponge that the electro-cautery should be introduced. It was heated rapidly as it passed lightly over the surface of the endometrium. After applying the electro-cautery the patient should remain in bed for a week. The application should be made five or six days following the menstrual period. In two cases of which M. Landowski spoke, in one the treatment proved a complete success; in the other, the patient passed pieces of membrane of the size of a penny during her periods, but she was relieved of pain. It would be interesting to know, adds the writer, if the exfoliative processes were only limited to that part where the application had been insufficient."

THE
NEW YORK MEDICAL JOURNAL,
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Edited by Frank P. Foster, M. D.

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THE MARINE-HOSPITAL SERVICE.

Until lately, many of the medical journals of this country—indeed, nearly all of them that have had anything to say on the subject—have bewailed the part assigned by the Government to the Marine-Hospital Service in the matter of national sanitation, especially in the management of the epidemic fund. It has so pained them to see the National Board of Health superseded that they have criticised Surgeon-General Hamilton unsparingly and somewhat harshly—on the principle, apparently, of "abusing the plaintiff's attorney" when the defendant has no case. He has been charged with incapacity, with immoderate ambition, and with manipulating Congressional committees after the manner of the professional lobbyist. At least one of our contemporaries has even gone so far as to deny the propriety of the nation's attending to the health of the men in the mercantile marine in so systematic a way. So far as we are aware, Dr. Hamilton has never turned aside from his important official duties to defend himself or his bureau, although on more than one occasion, as we have recorded in the past, he has met his official antagonists of the National Board of Health before Congressional committees, and has never failed to worst them. It is very much to his credit that he has pursued this moderate course—a course which, we are persuaded, has had much to do, in conjunction with his excellent administration of the affairs of his bureau, with putting an end to the unjust criticism alluded to.

It is many months since we have noticed any unkind mention of the Marine-Hospital Service or its official head by our contemporaries. Not only is this the case, but the practical achievements of the bureau are beginning to meet with favorable comment in quarters where it was hardly to be looked for. A striking instance is presented in a recent issue of the "British Medical Journal," which gives an editorial summary of the salient points in Dr. Hamilton's last annual report, and closes with this paragraph:

> "Reverting to the economic view of this question, which is that of the admirable measures taken on the other side of the Atlantic to provide for the necessities of the sick of the mercantile marine, not by public or private charity, but by a tax on tonnage, free from any mulct on the wages of the sufferers, with supplementary votes by Congress to assist in maintaining an efficient system, it may be said that neglect of State supervision appertaining to the welfare of our merchant seamen—the greatest in the world—underlies much of the discontent of this important class. Its present condition is a degraded one, because its rights are unrecognized, and its claims lie altogether at the mercy and under the judgment of the employers, many of whom are unquestionably honorable and kind-hearted gentlemen. Our Royal Navy presents a grand example of how much can be effected by raising the self-re-

spect of its seamen; but it is now a covenanted service, in which it is known and felt that rights are respected, and claims attentively listened to. But, in the event of war, Great Britain can man her fleets only from her mercantile marine, and therefore our Government should take a warm interest in it. The action of the United States Government shows its watchfulness, not only over the welfare of its navy, but over the merchant service. This 'bureau' has under it a far-reaching organization to care for them when sick and disabled. Why, it may be asked, should not we organize a system to the same end? The time has come for such to be done. Our seamen who go to Australia are fully aware that there their brethren have founded a 'trade union,' which is said to be one of the most influential in that new continent; and possibly it may have its emissaries in our home-ports, to disseminate their ideas and principles of self-help. The Royal Commission now investigating the causes of the unprecedented losses of life at sea might be usefully empowered to inquire into the closely affiliated question of the position of the ordinary means and appliances the mercantile seamen have allotted to them when sick or disabled at sea or on land."

SIR SPENCER WELLS ON EDUCATION.

Sir T. Spencer Wells presided over the Sanitary Congress held at York, England, during the last week in September, and delivered a notable address, an abstract of which is published in the "Lancet." The address touched upon a number of topics of popular interest in connection with sanitation in the broadest sense of the term, none of which perhaps were more important or more in need of adequate presentation than that of the mental and physical training of children. These two phases of education can not be considered apart, and consequently they both fall properly within the field of State medicine.

Under this head the first question considered by the speaker related to the present tendency to give girls an education fitting them for other occupations than those of domestic life—"to suckle fools and chronicle small beer." For his part, he saw no great cause for alarm in the movement, and he declared it a waste of breath to cry out about the dangers of women's taking up men's work. In this age, he said, education—at any rate, for the middle classes—must be pushed far beyond the limits formerly thought wide enough. He thought women capable of a great deal more than they had been accustomed to do in times past; and, if overwork sometimes led to disease, it was better to work into it than to lounge into it. Without questioning the statements of some medical practitioners that they had occasionally observed cases of mental or bodily disease brought on by overstrain of the mind, he said that it was only at long intervals that he himself had seen such cases, and, for every one of them, he was quite sure that he had seen at least twenty in which evils equally to be deplored had been caused in young women by want of mental occupation, by deficient exercise, by too luxurious a life, and by excess of amusement or excitement.

As for the boys, there were now so many industries in which scientific knowledge and exactness were requisite that mere rule-of-thumb work was almost out of date, and the want of early education cut off a young man's chances of advancement. A workman must be something more than a mere machine, and uneducated brains were worth no more in the market than untrained muscles. Some sacrifice must be made to meet these new requirements, and, while we pitied the few who fell in the struggle, we must remember that there was no chance for those who stood still. Much had been heard of late about over-pressure in school work, and no doubt it existed, but in part it could be traced to sanitary success in reducing the mortality of early infancy. Many children who would formerly have died offhand were now saved and, being the least fitted survivors, found their way into the schools, where, in spite of their weakness, they had to be forced up, if possible, to the same standard as the rest. These were the children that showed nervous symptoms, disappointed the teachers, and were the types brought forward as victims of the system. The vice of the system was that it was indiscriminate; the tasks were not graded to the children's powers. This was an evil that would remedy itself in time by the growing up of a larger proportion of strong children, and the present difficulty might be got over by a little patience and moderation—a little more regard to sanitary logic. The children must have training before education, and must be put upon something even less than a half-time system. Perhaps a fair corollary to Sir Spencer Wells's statements on this point would be the indulgence of only moderate expectations concerning ill-fitted survivors, with the hope in the background of their being able to bring into the world a succeeding generation so fully regenerate as to be able to bear the whole force of modern educational demands.

MINOR PARAGRAPHS.

THE AMERICAN ACADEMY OF MEDICINE.

Besides the scientific matters to come before the Pittsburgh meeting next week, some important propositions to amend the constitution and by-laws will be ready for action. These relate largely to the requirements for membership. It is well known that at present the Academy admits none but graduates from a school of arts. Three of the proposed amendments look to a modification of this rule. Dr. R. Lowry Sibbet proposes this: "Candidates having other literary degrees than bachelor of arts or master of arts may be elected as fellows, provided they shall not exceed five per centum of the whole number, and provided also that they shall have contributed to the literature of the profession." This, we think, would be inexpedient. It would be likely to give rise to a class distinction among the members, certainly an undesirable state of things. Moreover, to have "contributed to the literature of the profession" is not necessarily meritorious.

An amendment proposed by Dr. Albert L. Gihon, of the navy, seems to us far better. It reads: "Graduates in medicine who, having no degree in letters received in course, have distinguished themselves in medicine and collateral sciences shall be eligible to fellowship." Of much the same tenor is the following amendment, proposed by Dr. Lewis P. Bush: "Any physician who has achieved an honorable place in the profession, and has distinguished himself by the production of any valuable publication, may be nominated to fellowship by the council, who only shall originate the nomination."

PROFESSIONAL SECRECY.

Apropos of our recent article on "Professional Secrecy and Life Insurance," an eminent member of the profession of a neighboring city sends us the card of a certain "mercantile agency," and states that an individual professing to represent the "agency" lately called on him and asked for information concerning the recent death of a gentleman who, he had learned, had been under the doctor's care during his last illness. This person, who stated that his firm represented "all the principal life insurance companies in New York," became indignant and abusive when the information he desired was denied him. There can be no question that, our correspondent was quite right in the course he followed; indeed, he would not have been justified in revealing professional secrets under any such circumstances.

AN AFRICAN MEDICAL JOURNAL.

We have received two numbers of a four-page weekly paper, the "South African Medical Journal," published at Cathcart, Cape Colony. Each number opens with an excellent editorial article, followed by a short installment of a communicated article ("Cases illustrating the Utility of Iron Salts in Syphilis," by W. Darley-Hartley, M. R. C. S., L. R. C. P., L. M.), and closes with a number of pithy annotations. Mr. Darley-Hartley, the contributor alluded to, seems to be also the editor and proprietor of the journal. Such good work as he is doing in his triple capacity certainly deserves support and co-operation. Our information as to the number of physicians in the Cape Colony is rather vague, but we hope there are enough of them to sustain our contemporary.

MICHIGAN SANITARY RECORDS.

We are indebted to Dr. Henry B. Baker, of Lansing, Michigan, the efficient and painstaking secretary of the Michigan State Board of Health, for a set of thirty graphic charts prepared by him, presenting a condensed and very instructive record of facts relating to the health and the meteorological conditions of that State during the period of eight years, from 1877 to 1884. On a number of occasions we have spoken in commendation of the work done by the Michigan board and by Dr. Baker, and we must again congratulate the profession and the people of Michigan that the sanitary interests of the State are in such competent and zealous hands.

ITEMS, ETC.

Infectious Diseases in New York.—We are indebted to the Sanitary Bureau of the Fourth Division of the Health Department for the following statement of cases and deaths reported during the two weeks ending October 5, 1886:

DISEASES.	Week ending Sept. 28.		Week ending Oct. 5.	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever	37	14	35	12
Scarlet fever	20	3	17	2
Cerebro-spinal meningitis	7	7	5	4
Measles	29	3	38	3
Diphtheria	40	18	56	31

The Health of the State of New York.—It appears by the State Board of Health's "Monthly Bulletin" for August that during that month there was a total reported mortality of 7,142, of which 46·3 per cent. was in children under five years of age. The percentage from zymotic diseases was 31·42, including 20·77 from diarrhœal diseases, 1·45 from typhoid fever, and 4·30 from croup and diphtheria.

The New York State Medical Association.—The Fifth District Branch will hold its second annual meeting at 11 A. M. on Tuesday of next week, in Everett Hall, No. 398 Fulton Street, Brooklyn. Besides the president's address, by Dr. J. G. Porteous, papers are announced as follows: "Biographical Note on the late Dr. Frank H. Hamilton," by Dr. J. C. Hutchison; "Some Recent Impressions of Medicine in England," by Dr. Avery Segur; "The Milk Supply of Large Cities, and the Improper Mode in which it is conducted," by Dr. H. A. Pooler (with screen illustrations by E. W. Martin, Ph. D.); and "Leptomeningitis Infantum," by Dr. A. L. Carroll.

The Medical Society of Virginia will hold its seventeenth annual meeting at Fredericksburg on Tuesday and Wednesday, the 26th and 27th inst. Dr. Hugh T. Nelson, of Charlottesville, will deliver the annual address to the public and the profession, on "The Fallacies of Modern Medicine." The president's address, by Dr. Rawley W. Martin, of Chatham, will be on "Some Practical Hints in Hygiene." This will be followed by a general discussion on "Puerperal Septicæmia." Reports on advances in medicine will be presented as follows: Anatomy and physiology, by Dr. James A. Anderson, of Elba; chemistry, pharmacy, materia medica, and therapeutics, by Dr. R. M. Slaughter, of Theological Seminary; obstetrics and diseases of women and children, by Dr. Jacob Michaux, Dr. Hugh M. Taylor, and Dr. John F. Winn, of Richmond; surgery, by Dr. George B. Johnston, of Richmond; practice of medicine, by Dr. John S. Apperson, of Town House; hygiene and public health, by Dr. A. Z. Koiner, of Roanoke; ophthalmology and otology, by Dr. W. L. Robinson, of Danville; and psychology and neurology, by Dr. I. S. Stone, of Lincoln. In conjunction with these reports, the following papers will be read: "Some of the Causes of our Slow Advance in Therapeutics," by Dr. John Grammer, of Halifax Court-House; "Puerperal Eclampsia," by Dr. Bedford Brown, of Alexandria; "Chloroform and Chloral in Childbirth," by Dr. H. M. Clarkson, of Haymarket; "Laparotomy for Wounds of the Intestines," by Dr. Lewis Wheat, of Richmond; "Malarial Hæmorrhages," by Dr. Otis F. Manson, of Richmond; "The Ætiology of Zymotic Diseases," by Dr. M. A. Rust, of Richmond; "School Hygiene," by Dr. J. H. Claiborne, of Petersburg; and "Christian Burial *vs.* Cremation," by Dr. W. W. Parker, of Richmond.

The Jefferson Medical College.—The opening lecture for the session of 1886-'87 was delivered before a good audience, on Thursday evening, September 30th, by Dr. W. S. Forbes, professor of anatomy.

The Medico-chirurgical College of Philadelphia.—On Monday evening, October 4th, Dr. W. H. Pancoast, professor of anatomy and dean of the faculty, delivered the opening lecture for the coming session. Because of the lack of accommodations at the college building, the exercises were held in Association Hall, which was well filled by the students and their friends. The stage was occupied by the faculty and their corps of assistants, arrayed in caps and gowns.

Dr. Edward E. Montgomery has been elected to fill the chair of gynæcology.

The American Academy of Medicine.—We have already published a list of the gentlemen who are expected to read papers at the annual meeting, to be held at Pittsburgh, next Tuesday and Wednesday. Of the thirteen papers now announced on the programme, eight relate to educational, ethical, and allied subjects. Of the strictly scientific papers, Dr. J. Cheston Morris's is entitled "Prolonged Gestation," Dr. P. S. Conner's "The Medical Service of the United States Pension Bureau," Dr. V. P. Gibney's "The Treatment and Management of Tubercular Spondylitis," Dr. H. O. Marcy's "Is Modern Wound Treatment Scientific?" and Dr. Nathan Allen's "Physical Culture in Amherst College." The president's address will be given by Dr. R. Stansbury Sutton, of Pittsburgh.

The Medical Association of Northern New York will hold its annual meeting at Malone on Tuesday, the 12th inst. We were in error in stating last week that the meeting would be held on the 5th. The president's address will be given by Dr. Samuel S. Wallian, of New York.

Army Intelligence.—*Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from September 26, 1886, to October 2, 1886:*

Bache, Dallas, Major and Surgeon. Granted leave of absence for twenty-five days, to take effect on or about October 2, 1886. S. O. 143, Division of the Atlantic, September 24, 1886.

Gibson, Joseph R., Major and Surgeon. Granted two months' leave of absence from September 25, 1886, on surgeon's certificate of disability, in lieu of the unexpired portion of the ordinary leave of absence granted him in S. O. 158, A. G. O., July 10, 1886. S. O. 227, A. G. O., September 30, 1886.

Gardner, William H., Major and Surgeon. Ordered from Department of Texas to Department of the East. S. O. 227, A. G. O., September 30, 1886.

Appel, Daniel M., Captain and Assistant Surgeon. Assigned to duty at Fort Davis, Texas. S. O. 133, Department of Texas, September 22, 1886.

Wales, Philip G., First Lieutenant and Assistant Surgeon. Leave of absence extended to include November 5, 1886. S. O. 226, A. G. O., September 29, 1886.

Kendall, William P., First Lieutenant and Assistant Surgeon. Granted leave of absence for one month. S. O. 81, Division of the Pacific, September 24, 1886.

Mason, Charles F., First Lieutenant and Assistant Surgeon. Ordered for temporary duty at Fort Verde, Arizona Territory. S. O. 90, Department of Arizona, September 20, 1886.

Naval Intelligence.—*Official List of Changes in the Medical Corps of the United States Navy for the week ending October 2, 1886.*

Guiteras, D. M., Passed Assistant Surgeon. Ordered to Receiving-ship Franklin for temporary duty, October 3d.

Wentworth, A. R., Assistant Surgeon. Detached from Navy-Yard, League Island, and ordered to the U. S. S. Galena, October 1st.

Scott, H. B., Assistant Surgeon. Ordered to Navy-Yard, New York, October 1st.

Ashbridge, Richard, Passed Assistant Surgeon. Detached from the U. S. S. Swatara October 1st. Granted six months' leave.

Berryhill, T. A., Assistant Surgeon. Detached from the Museum of Hygiene and ordered to Receiving-ship Minnesota.

Arthur, George, Passed Assistant Surgeon. Detached from the Navy-Yard, New York, and ordered to the Museum of Hygiene.

Percy, H. T., Passed Assistant Surgeon. Detached from the U. S. S. Galena. To proceed home and wait orders.

Shafer, Joseph, Assistant Surgeon. Detached from the U. S. S. Minnesota, and ordered to the U. S. S. Swatara.

Steele, J. M., Passed Assistant Surgeon. Detached from the Naval Academy, and granted six months' leave.

Biddle, Clement, Passed Assistant Surgeon. Ordered to the Naval Academy, Annapolis, Md.

Marine-Hospital Service.—*Official List of Changes of Stations and Duties of Medical Officers of the United States Marine-Hospital Service, for the week ended October 2, 1886:*

Purviance, George, Surgeon. Granted leave of absence for twenty-five days. September 30, 1886.

Stoner, G. W., Surgeon. Granted leave of absence for twenty-three days. October 1, 1886.

Carter, H. R., Passed Assistant Surgeon. To proceed to Galveston, Texas, as inspector. September 30, 1886.

Ames, R. P. M., Passsed Assistant Surgeon. Granted leave of absence for thirty days, to take effect when relieved. September 30, 1886.

Wasdin, Eugene, Assistant Surgeon. Ordered to examination for promotion. September 30, 1886.

Brooks, S. D., Assistant Surgeon. Granted leave of absence for thirty days, to take effect when relieved. September 30, 1886.

Williams, L. L., Assistant Surgeon. Relieved from duty at Mobile, Ala., and ordered to the Marine Hospital, Wilmington, N. C. September 27, 1886.

Perry, T. B., Assistant Surgeon. Relieved from duty at San Francisco, Cal., and ordered to the Marine Hospital, St. Louis, Mo. October 1, 1886.

Society Meetings for the Coming Week:

Monday, *October 11th:* New York Surgical Society (in the afternoon); New York Academy of Medicine (Section in Surgery); New York Ophthalmological Society (private); New York Medico-historical Society (private); Lenox Medical and Surgical Society (private); New York Academy of Sciences (Section in Chemistry and Technology); Boston Society for Medical Improvement; Gynæcological Society of Boston; Burlington, Vt., Medical and Surgical Club; Norwalk, Conn., Medical Society (private).

Tuesday, *October 12th:* New York Medical Union (private); Medical Association of Northern New York (annual—Malone); Medical Societies of the Counties of Chenango (tri-annual), Greene (semi-annual—Cairo), Jefferson (quarterly—Watertown), Oneida (quarterly—Utica), Rensselaer, and Tioga (Owego), N. Y.; Newark (private) and Trenton (private), N. J., Medical Associations; Medical Societies of Bergen and Cumberland (semi-annual) Counties, N. J.; Litchfield, Conn., County Medical Society (annual).

Wednesday, *October 13th:* New York Pathological Society; American Microscopical Society of the City of New York; Medico-legal Society; Medical Societies of the Counties of Albany and Cayuga, N. Y.; Tri-State Medical Association (Port Jervis, N. Y.); Pittsfield, Mass., Medical Association (private); Franklin (quarterly — Greenfield), Hampshire (quarterly — Northampton), Middlesex South (Cambridge) and Plymouth (special), Mass., District Medical Societies; Vermont State Medical Society (annual—Montpelier); Philadelphia County Medical Society (conversational).

Thursday, *October 14th:* Society of Medical Jurisprudence and State Medicine; New York Laryngological Society (private); Brooklyn Pathological Society; South Boston, Mass., Medical Club (private); Pathological Society of Philadelphia.

Friday, *October 15th:* Chicago Gynæcological Society (annual).

Saturday, *October 16th:* Clinical Society of the New York Post-graduate Medical School and Hospital.

OBITUARY NOTES.

Joseph Sampson Gamgee, M. R. C. S., F. R. S. E.—We regret to learn, by our English exchanges, of the death of Mr. Gamgee, which took place somewhat suddenly on the 18th of last month, at his home in Birmingham, England, whither he had been taken from Dartmouth, where he had received an injury by slipping and falling in the street. The injury was found to be a fracture of the neck of the femur. In a few days vomiting of blood took place, and it recurred until his death. It is supposed that the deceased had chronic Bright's disease. Mr. Gamgee had made a number of distinct additions to our knowledge of surgery, especially in connection with the management of wounds. He was in his fifty-ninth year at the time of his death. His personal qualities had endeared him to a little knot of Americans who had had the good fortune to make his acquaintance.

Dr. Gouverneur M. Millspaugh, an aged practitioner of Walden, N. Y., died on Wednesday, October 6th, in the eighty-first year of his age. He was graduated from Castleton, Vermont, Medical College in 1826.

Proceedings of Societies.

AMERICAN GYNÆCOLOGICAL SOCIETY.

Eleventh Annual Meeting, held in Baltimore, Tuesday, Wednesday, and Thursday, September 21, 22, and 23, 1886.

The President, Dr. Thaddeus A. Reamy, of Cincinnati, in the Chair.

(*Continued from page 385.*)

Ergot after Labor was the title of a paper by Dr. John Goodman, of Louisville, Ky., which, in his absence, was read by the secretary. The administration of a full dose of ergot immediately after the completion of labor had become a general practice. It had been alleged that it promoted involution, prevented after-pains, and tended to prevent post-partum hæmorrhage. Some years ago the author administered a full dose of ergot after a perfectly normal labor. In fifteen minutes severe pain appeared and increased. The tenderness in the uterus continued for a week. There was no milk, and the patient, previously prolific, never again conceived. The trouble was attributed to inflammation of the muscular coat of the uterus, produced by the action of the ergot. In a second case ergot was given after a forceps delivery. On the seventh day the patient had a chill, followed by a temperature of 104°. The next day a clot was washed out of the uterus, and the temperature fell to 99°, well-marked septicæmia developed, and the patient died a week later. In this case the retention of the clot was attributed to the spasmodic contraction of the uterus preventing its escape. The author had seen other cases in which injurious effects were produced by the administration of ergot. He maintained that ergot did not assist involution, which was a natural process, and required a certain length of time for its completion. That ergot was capable of arresting after-pains could not be doubted, but it did so by exciting a mode of muscular action at variance with all physiological laws. After-pains were conservative, and it was better to wait until they became of abnormal severity before resorting to treatment. Ergot was capable of preventing hæmorrhage, but its use was attended with such dangers that it should be employed only under exceptional circumstances. It should be an inviolable rule not to give ergot at the close of the third stage of labor, unless hæmorrhage was imminent. It should then be used by hypodermic injection.

The President said that he was preparing a paper in which he protested against the routine practice of giving ergot after labor.

Dr. Goodell suggested that, since the author of the paper had stated that it was only since last May that he had given up the use of ergot, he had not had sufficient time to form such positive opinions. In the first case related there must have been a fibroid tumor. The second case was a clear instance of septicæmia. He did not think that after-pains were conservative. As a rule, they were not seen in primiparæ. These pains were, in great measure, the result of weaknesses induced by civilization. Not every woman who had given birth to a child needed ergot, but there were those who did. In twenty-five hundred cases of labor, he had always given ergot after the completion of labor, and he had never seen any harm from its use. He did not believe that one dose of ergot had much effect in favoring involution. Involution was the result of fatty degeneration, and the greater the contraction the greater the interference with the circulation, and the more rapidly should this change take place. He had used ergot to prevent hæmorrhage, and to prevent the absorption of septic matter. Since the introduction of antiseptics, which should be used in every case of labor, whether in public or in private, the use of ergot to prevent septic infection was not so important, but it did not do the harm which had been mentioned.

Dr. Engelmann held in the main the views which the president had expressed.

Dr. Theophilus Parvin, of Philadelphia, thought that the effect of ergot varied with the dose. A small dose simply increased the normal uterine contractions. He must object to the assertion that ergot should never be given before the completion of labor. Statistics showed that those who were most successful in the treatment of placenta prævia were the men who used ergot. Again, in a multipara, with the os dilated, where a sudden rupture of the membranes took place with a cessation of pains, fifteen or twenty grains of ergot caused a rapid completion of the labor. After a protracted labor there was a weariness of the uterus, with a failure to enter upon the normal retraction, which prevented hæmorrhage and tended to promote involution. If we assisted Nature in the expulsion of the placenta, why should we not assist her in securing normal retraction of the uterus after the completion of labor? In some experiments which he had made at the Philadelphia Hospital to determine the rapidity of involution of the uterus in women who had been given given ergot and in those who had not, uterine involution had seemed to take place more rapidly in the former.

Dr. A. J. C. Skene, of Brooklyn, did not think that in the cases reported the ergot had had anything to do with the production of the effects. All rational men used ergot like any other remedy, when it was necessary or might become necessary. If there was any doubt whether or not it was needed, it was better to give the patient the benefit of the doubt.

The President's Address.—The President then read his annual address. He first referred to the prosperity of the society during the past ten years, and spoke of the great advance of abdominal surgery and ovariotomy during the same time. He thought that the less satisfactory results obtained in America as compared with those of other countries might be due to climatic and constitutional conditions, and to the fact that the operation was performed by too many operators. The operation of removal of the ovaries for beginning cystic troubles and for other conditions was performed in many cases which could be relieved by other and less serious measures. The practice of leaving the healthy ovary was recommended. The success of ovariotomy had led to the performance of laparotomy in other conditions, such as suppurative peritonitis with satisfactory results. The use of electricity as a therapeutic agent was attracting much attention; it was the safest and most effective remedy in extra-uterine pregnancy, and it was coming into use in many other uterine conditions. The treatment of extensive fibroid disease was next taken up. Medical treatment was in the main unsatisfactory, although in some cases good results had followed the use of ergot and electricity, especially the latter, which was perhaps the most effective therapeutic agent in these cases. Spaying had met with more favor and success than any other surgical procedure. There were a few cases where, on account of the large size of the tumor or its fibro-cystic character, hysterectomy probably afforded the best hope. The total extirpation of the uterus for cancer had been steadily growing in favor. So far as the speaker had examined the clinical proof, the evidence as to its utility had not been convincing. While patients had recovered from the operation, it was not yet proved that the operation was justifiable except where the disease was confined to the body of the uterus or the cervix, and the vagina was free. In referring to the uterine curette, the speaker stated that he had recently had alarming symptoms following its use, and in one case, where the instrument was used immediately after dilatation with sponge-tents, death had resulted. Peritonitis had not been developed in a single case where the dilatation had not immediately preceded the operation. Rapid dilatation was alleged to be comparatively free from the dangers attendant upon the use of tents, but he had recently seen a high degree of peritonitis following dilatation by this method where the curette was not used.

The following rare case was then described: A married woman, aged thirty-two, the mother of two children, had suffered with severe menorrhagia during the past year. There was an old laceration of the perinæum, but no laceration of the cervix. The uterus measured three inches and a quarter, and was not tender. No pelvic tenderness could be detected. Treatment directed to the general condition was ordered, and under it the anæmia improved and the menorrhagia decreased. Some months later the blunt curette was used; no dilatation was required. During the manipulation, which was carefully conducted, the instrument passed through the uterine wall. It was at once withdrawn, and, a sound being introduced, it readily passed its whole length, and its extremity could be felt externally above the umbilicus. Forty drops of laudanum were administered by the rectum and an ice-bag was placed over the abdomen. The ice-bag was kept on continuously for five days. The accident caused no symptoms whatever. The perinæum was subsequently restored, and the woman's health was much improved. The menorrhagia had disappeared.

(To be concluded.)

ALUMNI ASSOCIATION OF THE WOMAN'S HOSPITAL.

Second Meeting.

(Continued from page 277.)

The Differentiation of the Various Kinds of Pelvic Cellulitis.—In the discussion of Dr. Goffe's paper (see page 397), Dr. W. Gill Wylie disagreed with the author in regard to only one or two points. He had spoken of the peritonæum tolerating pus. It was a mistake to say that it did. When pus got into the peritoneal cavity it became either absorbed or encysted. If encysted, it could hardly be spoken of as being in the peritonæum. He had seen several cases of pelvic abscess during the last winter, or cases which at one time would have been called cases of pelvic abscess. In four he operated; in the remainder a post-mortem was held, and in every case but one the starting point of the disease was found to have been in the Fallopian tubes. The disease had probably begun as a salpingitis; then there was oophoritis with surrounding exudation. He had found that when there was an exudation into the tube and ovary—that is, behind the broad ligament—which had accumulated beyond a certain amount, say from three to six ounces, rupture would take place and the pus would enter the peritoneal cavity, or else perforation would take place into the connective tissue. The latter was the usual result, and there was then an acute condition excited with the formation of a large pelvic abscess. He would not call the abscess intra-peritoneal, although the original starting point was intra-peritoneal. He was satisfied that there were such conditions as phlegmon and phlebitis with destruction of tissue in the broad ligament. He had followed two cases last winter, before and after death, and there was a distinct phlegmon in the broad ligament outside of the peritonæum. In the commencement they were undoubtedly cases of phlebitis and lymphangeitis due to a laceration of the cervix uteri through the vaginal junction into the connective tissue.

Dr. A. P. Dudley had understood Dr. Goffe to say that he had never seen a case of pelvic abscess originating as such. This led him to relate the history of a case of ovarian tumor in which he had operated in Dr. Scott's hospital in San Francisco. There was a simple cyst of the right ovary with a long pedicle. The pelvic peritonæum was perfectly healthy aside from the presence of a small amount of serum due to the movements of the tumor. Beneath the tumor in the cellular tissue around the uterus was an abscess containing over a pint of foul pus. There could be no mistake in saying that the abscess was beneath the peritonæum. There was no pelvic peritonitis whatever.

Dr. R. W. Wilcox said that in the spring of 1882, when he was attending the clinics for diseases of women in Paris, particularly those of Martineau at the Lourcine, it was a matter of frequent experience to hear the diagnosis of perimetric adenitis. In contrast to the treatment described by the author of the paper he would say that those cases yielded very readily to counter-irritation by means of the Paquelin cautery applied over the abdomen two or three times a week, and to support of the uterus by means of a cotton tampon smeared with belladonna ointment. When he returned to New York and became a member of the house staff of the Woman's Hospital he found that for many of the same class of cases the term pelvic cellulitis was used. Therefore the observations regarding perimetric adenitis as a distinct form of pelvic inflammation were of earlier date than the one that Dr. Goffe had mentioned.

Dr. W. M. Polk, an invited guest, thought that, after all, the essential point in the discussion was the question of treatment. We might differ in our views regarding the pathology, but, unless we made some practical deductions from that pathology, we were not likely to do much harm nor much good. The surgeon of to-day, if he mistook not, when presented with a case of distension of the Fallopian tube with pus or muco-pus, thought that there was justification for removal, and the point which he thought should be made clear (and he spoke with all deference to the president, Dr. Emmet) was that acute cellulitis, so-called, was nothing more than an acute pyosalpinx with which there was generally associated peritonitis. If the abdomen was opened there would be found distension of the tubes with muco-pus. Allowing the patients to remain in bed, as they were disposed to do (for they had considerable distress), and treating them by the method adopted by Emmet and Sims when they called the condition a cellulitis—by counter-irritation, hot water, and opium—they would get well. If they were examined a few months later it would be found that the tumor which had lain between the uterus and the pelvic wall, or which perhaps had extended entirely around behind the uterus, had disappeared, leaving the uterus movable. It would be possible that in the upper part of the broad ligament there could still be found some tenderness, due to some inflammation of the tube. But these people went on menstruating and bearing children.

There was another class of cases in which the tumor followed a gonorrhœa, or, it might be, an abortion, or a delivery at term, in which the inflammation within the Fallopian tube would not subside so readily, but would result in chronic salpingitis, possibly with recurring attacks of peritonitis—cases which counter-irritation and improvement of the general health would not affect in the slightest degree. Such patients would go from one physician to another, who, being unable to relieve them, would say that when the change of life came they would probably get well. But the patients continued to have attacks of peritonitis. The speaker thought that gynæcology had gained much in the treatment of this class of cases by the experience of Mr. Tait. He had shown us that such patients were the victims of chronic inflammation of the uterine appendages, and that the treatment which they had received by former methods was utterly futile. But when to-day we opened the abdominal cavity and removed the chronically inflamed tubes we gave the women the best, and, he believed, the only, chance of relief.

Dr. H. C. Coe desired to correct the reader, who seemed to labor under a misapprehension regarding his (Dr. Coe's) views on cellulitis. He was very far from denying the existence of inflammation of the pelvic cellular tissue, nor did he subscribe at all to the extreme opinions of Dr. Goffe. He called attention to several paragraphs in his paper on minor pelvic inflammations (read at the January meeting of the association), in which he clearly admitted the occurrence of cellulitis. Thus, in one place he had said: "I agree with Dr. Emmet in his opinion that 'the point of origin of inflammation in the pelvic cellular tissue is in the veins,' because I have verified this in the cadaver by tracing the diseased vessels directly from a lacerated cervix along the base of the left broad ligament. It was quite rational to regard this phlebitis, or, more correctly, peri-phlebitis, as one of the principal causes of cellulitis, because it is a well-known anatomical fact that the connective tissue between the two folds of peritonæum known as the broad ligament is largely distributed along the course of the vessels. Hence a peri-phlebitis in this locality is a cellulitis."

The speaker protested against the radical doctrine that all pelvic abscesses were intra-peritoneal. He had certainly observed at the autopsy-table circumscribed collections of pus, which lay entirely *beneath* the peritonæum; moreover, he had found pelvic abscesses associated with normal tubes, and hence independent, as regarded their origin, of a previous pyosalpinx. He believed that peritonitis was by far the more common form of inflammation in the circum-uterine tissue, but he would not go so far as to regard cellulitis as an impossibility.

(*To be concluded.*)

Book Notices.

Tablets of Anatomy. By Thomas Cooke, F. R. C. S. Eng., B. A., B. Sc., M. D., Paris, etc. Being a Synopsis of Demonstrations given in the Westminster Hospital Medical School in the Years 1871, '72, '73, '74, '75. Fourth Edition. London: Longmans, Green, & Co., 1885. Pp. 294.

Dr. Cooke's tablets possess no little popularity among English students, from which we may infer that "examining" is an art not confined to this side of the water. They form a condensed "Gray," such as is used to prepare on the eve of examination. Although, as the author states in his preface to the first edition, the tablets are intended for those students "who are doing or have done their work honestly and conscientiously," it is to be feared that its use will not be confined to that exemplary class. The present volume is rather poorly bound, but the paper and print are good. The reputation of the author as a teacher of anatomy entitles it to a worthy place in the reader's esteem.

Diseases of the Spinal Cord. By Byrom Bramwell, M. D., F. R. C. P. (Edin.), Lecturer on the Principles and Practice of Medicine, and on Medical Diagnosis, in the Extra Academical School of Medicine, Edinburgh, etc. Fifty-three Colored Plates and One Hundred and Two fine Wood Engravings. Second Edition. New York: William Wood & Co., 1886. Pp. xiv–298. [Wood's Library of Standard Medical Authors.]

Dr. Bramwell, in spite of the difficulties of the subject, has produced within a reasonable compass a very readable book upon the Diseases of the Spinal Cord. While the book shows the results of original work in pathology, it represents as well the recent contributions by other laborers in this special field and gives an excellent portrayal of the present state of medical knowledge. The illustrations are especially to be commended, and particularly those presenting sections of the cord, not only for their fidelity to nature, but as well for their mechanical execution. Although the subject is treated more from the standpoint of the pathologist, and although at times the pathology seems stated with too great positiveness, yet the clinician also will find the book well worthy of a careful perusal.

Organic Materia Medica and Therapeutics. By James Young Simpson, M. D. In accordance with the Sixth Revision of the United States Pharmacopœia. New York: J. H. Vail & Co., 1885. Pp. 337.

This work by its title challenges comparison with the excellent little work of Professor Maisch, the second edition of which appeared a year ago. It differs, however, in its scope from the latter, which is professedly addressed to the pharmaceutist, and contains, therefore, a pretty full account of the botany, chemistry, and pharmacy of the plants described, while their physiological and therapeutical properties are but briefly indicated. Dr. Simpson, on the contrary, devotes a large part of his space to the consideration of the latter topics, giving under the name of each drug its general and physiological action and therapeutical application, its toxicology, and the preparations into which it enters. This part of the work seems well done, and it is conveniently arranged for reference and study. On the other hand, that part which deals with botany and pharmacy, being evidently, as the author himself frankly acknowledges, a compilation, fails to afford that sense of completeness and accuracy which the work of an authority like Professor Maisch inspires, and is, on the whole, much less satisfactory than the similar portions of the "Organic Materia Medica" of the latter.

Dr. Simpson's book is, however, well adapted for students, whose work will be facilitated by the methodical division and arrangement of topics under each head. There are a few important misprints which should be corrected, as well as the strange inconsistency into which the author has fallen in the nomenclature of the alkaloids, writing, for example, in the same line, morphin, narcotine, codeine, and thebain. It would be well if the distinction now observed in both the United States and British Pharmacopœias, admitting the final e in alkaloids and rejecting it in all other compounds, were adopted in all our works on materia medica.

A Treatise on Practical Chemistry and Qualitative Inorganic Analysis, adapted for Use in the Laboratories of Colleges and Schools. By Frank Clowes, D. Sc. Lond., etc. With Illustrations. From the Fourth English Edition. Philadelphia: Lea Brothers & Co., 1885. Pp. xiv–376.

This work has long been a favorite with laboratory instructors on account of its systematic plan, carrying the student step by step from the simplest questions of chemical analysis, involving the determination of but a single element, to the more recondite problems in which a mixture of compound bodies is to be resolved into its constituents. Features quite as commendable are the regularity and system demanded of the student in the performance of each analysis. If he follows the directions faithfully, moreover, the fullness with which chemical processes and manipulations are described makes the work a specially valuable laboratory hand-book.

These characteristics, familiar to those who have worked out chemical analyses by the aid of Clowes's treatise, are preserved in the present edition, which we can heartily recommend as a satisfactory guide for the student of inorganic chemical analysis.

A Theoretical and Practical Treatise on the Hæmorrhoidal Disease, giving its History, Nature, Causes, Pathology, Diagnosis, and Treatment. By William Bodenhamer, A. M., M. D. Illustrated by Two Chromo-lithographic Plates and Thirty-one Wood-cuts. New York: William Wood & Co., 1884. Pp. xvi–297.

As a curious historical study of hæmorrhoids from the time of Moses to the present, this book possesses some interest. As a practical study of the disease, we fail to discover anything of importance in its pages beyond what is found in all works which treat of it at all. The author still uses the ligature, and condemns injections without having tried them, and he quotes extensively from the literature of the fifteenth century, but makes no mention of Van Buren.

A Manual of Dietetics. By J. Milner Fothergill, M. D. Edin., Physician to the City of London Hospital for Diseases of the Chest, etc. New York: William Wood & Co., 1886. Pp. viii–255. [Price, $2.50.]

Dr. Fothergill believes so firmly in his reasoning, expresses himself with such force, and mingles so much good advice with crude theory and loose statement, that it is difficult to write a fair notice of his book. The remark that a carnivorous animal can not run down the herbivorous deer, save in a short, swift rush, because meat is a food which can set free a large amount of force in a short time, but furnishes no staying power, is a fair sample of his loose writing. If the carnivorous animal is a tiger, one of the cat family, it is true that he can not compete with a deer in a long run, but a flesh-eating wolf runs a deer down by tiring him out, pursuing him relentlessly hour after hour until the victim is exhausted. It is quite as much a question of the anatomical structure of the carnivorous animal as of the food he uses for fuel.

The book opens with a study of food, its object, its forms, and its methods of preparation, together with chapters on beverages and stimulants. The subject of prepared and artificially digested foods is carefully considered. The second part contains chapters on food in health, from infancy to old age, and the diet appropriate to various morbid conditions. The author continually refers to a matter often overlooked—the necessity of variety in invalids' diet as well as in that of the healthy. His chapter on diet in acute disease is very suggestive. Most satisfactory articles are those on diet in struma and consumption. However one may disapprove of the author's views of the nature of these conditions, his practical hints are admirable. In treating gout and Bright's disease, Dr. Fothergill lays great stress on non-nitrogenous diet. In spite of his objection, many patients, it is said by good authorities, do well on a diet rich in nitrogen. The author's views here seem to us narrow. Although disappointing in many respects, the book will fill a certain want because of its intensely practical character.

GENERAL LITERARY NOTES.

Among new books and new editions published abroad we note rhe following:

J. & A. Churchill, London.—F. B. Jessett, "Cancer of the Mouth," etc. (10*s.*)

H. K. Lewis, London.—J. Startin, "Parasitic Eruptions." (2*s.* 6*d.*) ——S. Ringer, "Hand-book of Therapeutics," 11th ed. (15*s.*) —— W. Murrell, "Massage." (3*s.* 6*d.*)

Renshaw & Sons, London.—J. Startin, "Syphilitic Eruptions." (2*s.* 6*d.*)

Henry Renshaw, London.—S. Benton, "Fistula, Piles, and other Diseases of the Rectum. (1*s.*)

Asselin et Houzeau, Paris.—A. Bouchard, "Nouveaux éléments de pathologie externe," vol. i, part 1. (6*fr.*)

A. Delahaye et E. Lecrosnier, Paris.—Boucomont, "Dé l'angine granuleuse arthritique." (1*fr.* 25.) —— Fargère et Maubrac, "Des luxations pathologiques." —— Oddo, "La période de réaction du choléra." (3*fr.* 50.)

Lahure, Paris.—C. James, "La rage; avantages de son traitement par la méthode Pasteur." (2*fr.*)

G. Masson, Paris.—E. Follin et S. Duplay, "Traité élémentaire de pathologie externe," tome vii, fascicule 3: "Maladies des organes génitaux de la femme." (4*fr.*—sold separately.) —— L. Ollier, "Traité des résections et des opérations conservatrices . . . sur le système osseux." (16*fr.*) —— J. Marsoo, "Salies de Béarn et ses eaux chlorurées sodiques bromo-iodurées." (2*fr.*)

Office of the "Progrès médicale," Paris.—H. Leloir, "La lèpre." (30*fr.*) —— H. Leloir, "Leçons sur la syphilis." (5*fr.*)

Arnoldi, Leipsic.—C. Neumann, "Wegweiser zur praktischen Verwerthung der Elektricität als Heilkraft." (5*M.*)

A. Felix, Leipsic.—C. S. F. Credé, "Gesunde und kranke Wöchnerinnen." (6*M.*)

E. Grosser, Berlin.—Brandau, "Ueber die habituelle Hyperidrosis pedum." (50*Pf.*) —— G. Hünerfauth, "Geschichte der Massage." (1*M.*)

H. S. Hermann, Berlin.—J. Apella, "Zur medicinischen Statistik." (60*Pf.*)

Stahel, Würzburg.—T. Aschenbrandt, "Die Bedeutung der Nase für die Athmung." (1*M.* 50.)——E. Jacobi, "Zum feineren Bau der peripheren markhaltigen Nervenfaser." (1*M.* 80.)——S. Jussewitsch, "Ueber die Absorption von Alkaloiden in verschiedenen Organen des lebenden Thierkörpers." (80*Pf.*)——A. Fick, "Betrachtungen über den Mechanismus des Paukenfelles." (80*Pf.*)——A. Fick, "Die Druckcurve und die Geschwindigkeitscurve in der Arteria radialis des Menschen." (1*M.* 60.)

Urban & Schwarzenberg, Vienna.—H. Eichhorst, "Handbuch der speciellen Pathologie und Therapie," 3d ed., 1st vol. (11*M.*)

Veit & Co., Leipsic.—H. L. Cohn, "Ueber die Nothwendigkeit der Einführung von Schulärzten." (1*M.* 20.)

Vieweg & Sohn, Brunswick.—A. Baginsky, "Die Kost- und Haltekinderpflege in Berlin." (1*M.*)——G. Schultz, "Die Chemie des Steinkohlenteers," 2d ed., 1st vol., 3d part; "Die Rohmaterialien." (7*M.*)

J. J. Weber, Leipsic.—J. Ravoth, "Die Unterleibsbrüche," 2d ed. (2*M.*)

Fratelli Rechiedei, Milan.—U. Maccabruni, "Nota sulla Epilessia Larvata." (1*l.*) —— G. Rezzonico, "Sull' origine della Guaina di

Schwann." (1*l.*)——C. Raimondi, "Rassegna di Medicina Legale." (1*l*)——G. Pagello, "Sulla Etiologia della Calcolosi Vesicale." (1*l.*)——A. Selmi, "Manuale di Chimica Applicata." (7*l.* 50.)——V. Salvi, "Tubercolosi." (3*l.*)——G. Cattani, "Antipirina e Antipiresi." (3*l.*)

Barris y Ca., Barcelona.—J. Gelpi y Jofre, "Tratado Iconográfico de las Enfermedades Externas del Órgano da la Visión." (110*pes.*)

BOOKS AND PAMPHLETS RECEIVED.

Surgical Notes from the Case-book of a General Practitioner. By William C. Wile, M. D., Newtown, Conn. [Reprinted from the "New England Medical Monthly."]

Handbuch der physiologischen Optik. Von H. von Helmholtz. Zweite umgearbeitete Auflage. Mit zahlreichen in den Text eingedruckten Holtzschnitten. Dritte Lieferung. Hamburg und Leipzig: Verlag von Leopold Voss, 1886. Pp. 161 to 240, inclusive.

Meconeuropathia. By C. H. Hughes, M. D. St. Louis. [Reprinted from the "Alienist and Neurologist."]

A Manual of Minor Surgery and Bandaging for the Use of House-Surgeons, Dressers, and Junior Practitioners. By Christopher Heath, F. R. C. S., Surgeon to University College Hospital, London, etc. Eighth Edition. Philadelphia: P. Blakiston, Son, & Co., 1886. Pp. xvi–360. [Price, $2.]

Reports on the Progress of Medicine.

GENERAL MEDICINE.

By H. N. VINEBERG, M. D.

Ulcerative Endocarditis.—Dr. B. Bramwell ("Amer. Jour. of the Med. Sci.," July, 1886) contributes an article on ulcerative endocarditis, together with a report of cultivation and inoculation experiments by Mr. A. W. Hare. The paper is freely illustrated with pencil and camera-lucida drawings. In 14 cases that came under the author's observation, the aortic valves were affected in all—results differing from those of other observers. In 200 cases analyzed by Dr. Osler, the aortic valves were involved in 94 cases only. Perforation of the aortic-valve segments occurred in 8. Vegetations were present on the endocardium in several instances. The spleen was found invariably enlarged, being in most instances soft and pulpy. Acute croupous pneumonia existed probably in 7 cases, and the kidneys were found enlarged in 8 cases. Micro-organisms were detected in the vegetations in all the cases (11) in which they were sought for. In one of the cases which had a "pyæmic type" a careful microscopical examination of all the organs was made. Micrococci in abundance were found in sections of the skin, in the choroid coat of the eye, in an artery of the superficial layer of the gray matter of the brain, in the meninges, in the Malpighian tufts, and in the cortex of the kidney. Dr. Osler pointed out in the Gulstonian Lectures of 1885 the frequent association of acute croupous pneumonia with ulcerative endocarditis. In two of the three cases of the author's series micrococci were found in the exudation filling the air-cells, but the author could not satisfy himself that they were identical with the micrococci in the cardiac vegetations. The clinical history of a case of the type which Osler has termed "cerebral" is given; then follow the clinical records of four cases of the cardiac type. The cultivation and inoculation experiments were carried out in three series. The inoculations had been made in a rabbit and were followed by negative results. No definite conclusion, however, could be reached, as the rabbit is thought to be insusceptible to human ulcerative endocarditis. In a concluding note Mr. Hare states that, since his experiments were performed, Wyssokovitsch has been experimenting in the same direction. Pure cultivations of the micrococci obtained from pus in acute inflammatory conditions were employed as materies morbi. Rabbits were the animals chosen, and, after an abrasion of the aortic valves had been produced, a considerable quantity of the infective material was injected into the blood-stream. The results were positive, the animals soon exhibited all the symptoms of ulcerative endocarditis, and the autopsy revealed the typical lesions of that disease. By simple injection, without injury of the valves, Wyssokovitsch failed to produce the disease. Professor Ribbert, of Bonn, following up this line of investigation, injected large quantities of the infective material into the blood-stream of rabbits, without previously injuring the aortic valves, and succeeded in producing the lesions of ulcerative endocarditis. When small quantities of the infective material were used, the animals died in a pyæmic condition.

[Osler, in the Gulstonian Lectures, already referred to, expressed his belief that the ætiology of ulcerative endocarditis and its relationship to other infective diseases would be best determined by experimental methods, though the work that had been done until then was of an unsatisfactory nature. The work that has been done in this connection since then has not been definite enough to warrant any scientific conclusions. It seems necessary that some other animal than the rabbit should be selected for the experiments—a selection which has not yet been made.]

Peripheral Neuritis in Tabes.—Pitres and Vaillon have been engaged for some time past in investigating the condition of the peripheral nerves in certain affections, notably typhoid fever and tuberculosis. In the "Revue de médecine," July, 1886, they publish the results of their further investigations of the peripheral nerves in tabes. According to these authors, Pierret was the first, in 1880, to assert that the cranial and spinal nerves, as well as the optic, in tabes might become the seat of changes without any direct continuity with the recognized changes in the central nervous system. But his assertion was not backed by pathological demonstrations. Déjerine in 1882 communicated to the *Société de biologie*, of Paris, the history of a case of tabes in a woman who, while living, had presented patches of anæsthesia. At the autopsy the cutaneous nerve-branches corresponding to these patches were found to have undergone profound alterations. Peripheral neuritis in tabes dates from that period.

In their paper the authors embody a *résumé* of all the published cases since 1882—seven in number—together with full clinical and pathological notes of five cases which they themselves have observed. The microscopic appearances of the nerves differ in no respect from the well-recognized changes of non-traumatic neuritis. In the majority of the cases it is the extreme terminal branches of the cutaneous motor and sensory nerves that are implicated, and, on examining several segments of the same nerve, that which is most peripheral shows the changes in the most marked degree. In a few exceptional cases the nerve-trunk is involved while the peripheral branches remain intact. A relative dependence of the changes in the nerves on the changes in the cord has still to be demonstrated, for in one case in which the spinal sclerosis was symmetrical the peripheral neuritis was limited to one side. A great many of the incidental symptoms in the course of tabes find their explanation in the existence of a peripheral neuritis. Such are the anæsthesias and analgesias, the palsies, certain cases of muscular atrophy, and various trophic disturbances of the skin, nails, joints, bones, and teeth. The trophic disturbances of the skin are manifested by various eruptions—in one of the cases there was a desquamative ichthyosis. The disorders in the nutrition of the joints form the *arthropathies des ataxiques* of Charcot, which are not infrequently met with. Falling into the same category are the spontaneous fractures of the bones sometimes met with in tabes. The authors arrive at the following conclusions: 1. That the peripheral nerves in tabes are, without doubt, often the seat of inflammatory changes. 2. That the neuritis in tabes does not differ in its anatomical characters from the other now well-known non-traumatic neuritides. 3. That the nerves affected vary much in different subjects; the changes may attack the sensitive, mixed, or visceral nerves. 4. That in the majority of the cases, but not in all, the changes begin in the extreme terminal branches. 5. That the extent and gravity of the neuritis bear no relation to the age of the patient, or to the extent or severity of the medullary lesion. 6. That the neuritis plays no rôle in producing the specific symptoms of tabes, but forms the cause of certain inconstant symptoms that occur. 7. That the visceral crises of ataxics may, in some cases, be due to the neuritis. In a foot-note the authors state that Pierret has recently made another communication to the Academy of Sciences in which he asserts the great frequency and curability of peripheral neuritis in tabes. Pierret adds that the existence of a peripheral neuritis concomitant with a central lesion offers a new view of chronic inflammation. That is to say, without ceasing to be systematic, lesions may occur in different parts of the nervous system without the intervention of conducting or intermediate lesions.

Loss of the Patellar Reflex in Diabetes.—Marie and Guinon (*Ibid.*) draw attention, in a concise paper, to the knee-phenomenon in glycosuria. Bouchard, in 1881, was the first to describe the loss of the patellar reflex in diabetes. Since then various observers have carefully observed cases of diabetes for this phenomenon, with the result of finding it in a respectable number of cases. In eight cases of diabetes the authors have observed it in three cases, full clinical notes of which they embody in their paper. The subjects were past middle life, ranging from forty-four to fifty-nine years of age, and had suffered from diabetes one, seven, and twenty years, respectively. They exhibited no other symptom of tabes, and did not suffer from paralysis or from any disturbance of sensibility. The loss of the reflex was complete, and obtained on both sides. The condition of the cremaster and abdominal reflexes was noted in one case only, and it is stated that it was normal. The authors attach a prognostic value to the loss of the reflex, which they base upon statistics furnished by Bouchard. This observer states that in sixty-six cases of diabetes the patellar reflex was absent in nineteen, and the mortality among these was 30·3 per cent., while, in the forty-seven cases with normal patellar reflex, the mortality was only 4·25 per cent. In a later communication Bouchard gives further statistics of one hundred and eleven cases of diabetes, in forty-one of which the patellar reflex was absent. The rate of the mortality among the forty-one cases was 14·63 per cent., and in the seventy cases with preserved patellar reflexes it was only 7·14 per cent.

Hemichorea as Symptomatic of a Cerebral Lesion.—H. Bidou ("Rev. de méd.," August, 1886) employs the term hemichorea in a wider sense than usual, and makes it include all those involuntary and incoordinate muscular movements which are commonly described under the names of athetosis, hemiataxia, disseminated hemisclerosis, and hemiparalysis agitans. A critical review of the history of the affection is given. Though hemichorea was described as early as 1835, it was not until 1875 that Charcot grasped its significance, and assigned to it a cerebral origin. Still, Charcot's view that it was always due to a lesion of the internal capsule had to be modified in the light of subsequent autopsies, and now it is known that the symptom may be caused by a lesion of different parts of the brain. In all its forms hemichorea is closely connected with hemiplegia, and it may be said, therefore, in a general sense, that hemichorea has the same causes as hemiplegia. Rarely the two conditions set in simultaneously. More frequently a patient has an apoplectiform attack, followed shortly by a hemichorea. In a few hours or days a hemiplegia develops, and with it disappear the involuntary and incoordinate muscular movements. After a variable period the patient recovers, but the hemichorea does not reappear. Should the same patient have a second seizure of apoplexy, it is usual for the consequent paralysis to be preceded by a hemichorea, as in the first onset. The third variety, *post hemiplegiam*, is the most frequent. The involuntary movements begin to set in when the hemiplegia manifests decided improvement. In infants the same rules do not obtain. In them it is common to have the affection set in with unilateral convulsions, with loss of consciousness; then follows a hemiplegia, which, in a short space of time, is complicated with choreiform movements of the affected side. At the conclusion of the paper, a *résumé*, in tabular form, is given of all the cases in which an autopsy had been made the author could find in literature. An analysis of the tables, which comprise eighty-one cases, gives the following data: In two cases the lesion was insufficient to account for the symptoms; in one case the lesions were too numerous and too complex to be of any service for localization purposes. In nine cases the lesion was on the same side as the hemichorea, and had its site in different parts of the hemisphere. In the remaining cases—sixty-nine in number—the lesion was situated on the side opposite to that of the affection. Of these patients, ten had lesions situated in the optic thalamus, three in the lenticular nucleus, one in the caudate nucleus, four in the internal capsule, three in the crura cerebri, and the others had multiple lesions.

Ataxic Paraplegia.—Dr. W. R. Gowers ("Lancet," July 9, 1886) made ataxic paraplegia the subject of a clinical lecture delivered at University College Hospital. He said that the manifestations of the disease were so definite that it deserved separate description. The disease occurs in both sexes, but is more frequent in men than in women, and occurs most commonly during the middle period of adult life. Heredity and syphilis can not be considered as causes. In some cases exposure to cold seems to be the exciting cause; a concussion is often the starting-point of the disease. Mental distress and anxiety may act as ætiological factors, but in many cases no cause can be assigned. The disease sets in gradually and progresses slowly, manifests itself in almost all cases in the legs, to which it may remain limited throughout, or sometimes may afterward invade the arms in various degrees. The characteristic feature of the disease is a slow and simultaneous development of two symptoms—weakness and ataxy. The tendon reflexes are increased, and there is absence of the "lightning pains" of tabes. The "pupil symptom" and "visceral crises" of tabes are also wanting. Atrophy of the optic nerve occurs only rarely. As the disease advances, the incoordination does not seem to increase much, but the muscular power becomes more and more impaired, the increased irritability of the muscles continues, and stiffness and rigidity develop in consequence. Sensation usually remains normal during the whole course of the affection. There is, as a rule, no wasting of the muscles nor any change in their electrical excitability. The disease runs a very chronic course and has little tendency to cause death. Hence our knowledge of its pathology is meager. In the few cases in which an autopsy was made sclerosis of the posterior and lateral columns of the cord was found. The sclerosis of the posterior columns differs from that of tabes in being less intense, and in not having the same special intensity in the root-zone of the posterior external column. The peripheral nerves seem not to have been examined in any case. The muscles were found normal. The author has nothing special to offer in the treatment of the disease. Calabar bean and belladonna helped some of his patients. Electricity is of little value, and faradism should be avoided.

Diabetic Coma.—This formed the subject of the "Bradshawe Lecture" delivered at the Royal College of Physicians ("Lancet," Aug. 21, 1886) by Dr. Julius Dreschfeld. Coma may occur in diabetes from conditions which are common in other diseases, such as cerebral hæmorrhage, acute cropous pneumonia, interstitial nephritis, and other intercurrent affections. But of true diabetic coma there are three kinds: 1. Diabetic collapse, consisting in the development of drowsiness with extreme coldness of the surface, quick pulse, and shallow breathing. Death occurs, with falling temperature, in from ten to twenty-four hours. The urine contains from 5–8 per cent. of sugar, but no aceto-acetic acid, and only a little albumin. The autopsy reveals no great changes; the heart is found in a state of fatty degeneration, and the liver presents patches of fatty metamorphosis. This form is most frequent in people above forty who have had diabetes for some time—in cases that Hoffman has described as the constitutional diabetes of stout people. The exciting cause may be some extra physical exertion, sudden shock, or error in diet or drinking, and the proximate cause, probably fatty degeneration of the heart, as Frerichs believed. 2. An alcoholic form of diabetic coma, presenting all the appearances of acute alcoholic intoxication. The lecturer detailed typical cases of this kind in which sugar and alcohol were found in the bladder, yet circumstances rendered it impossible that the patients could have obtained alcoholic liquor. 3. Diabetic coma in which dyspnœa (Kussmaul's symptom) forms a prominent feature. Dr. Dreschfeld had seen sixteen cases of this form, ten of which were completed by a necropsy. It is usually ushered in with lassitude, slight dyspnœa, or severe gastric pain. The lecturer gave a detailed account of the symptoms as they could be gathered from a study of eighty cases. Prominent among these were dyspnœa—first inspiratory, afterward expiratory as well, diminution of the glycosuria even to disappearance, excessive acidity of the urine, in which Minkowski has detected oxybutyric and aceto-acetic acids, albuminuria (constantly), attended sometimes with hyaline and granular casts and occasionally with fat, initial rise of body temperature followed by a great fall, even to 90° F., as had been observed in one case, and fat, in varying proportions, as a constituent of the blood. Ninety per cent. of the cases proved fatal within a few days, and 70 per cent. occurred between the ages of twenty and forty. It had been known to occur in children as young as five. The diabetes had lasted from six to twelve months before the coma had occurred. Diabetic coma is known to occur in families. The nervous system shows no constant changes. Fat embolism as a cause of death was found but once. Dr. Dreschfeld considers blood-poisoning as the only probable explanation of the pathology of diabetic coma. The author made several experiments on man and rabbits with a view of ascertaining whether acetone, aceto-acetic acid, and oxybutyric acid were capable of producing the train of symptoms. The general conclusion arrived at was that man and animals could take large doses of these acids without suffering in any marked way, provided the excretory organs were in good working order. But in diabetes the organs of elimination—the liver and kidneys—are deranged, and those acids in consequence accumulate and produce intoxication. The source of the acids is a disputed point; some regard them as a result from oxidation of sugar. Von Jaksch supposes them to be due to a derivation from albuminous bodies. The treatment should consist in the avoidance of the exciting causes already mentioned, and in the prevention of constipation. Antiseptics and bicarbonate of sodium in large doses have not yielded satisfactory results. Altogether the prognosis is very gloomy and the diabetic must be regarded, as Prout said, to be "walking on the brink of a precipice."

Night Palsy.—Dr. W. E. Stevenson ("Practitioner," June, 1886) contributes a short article on a special form of numbness of the extremities occurring, for the most part, during the night, and to which Weir Mitchell has given the name of night palsy. Dr. Ormerod's description is quoted as follows: "The symptoms are remarkably definite in character. They occur in women, usually about the climacteric period, and begin in the night. On waking, the patient has a feeling in the hands and arms (commonly on both sides) of numbness, deadness, pins-and-needles; sometimes there is actual pain, severe enough to wake her. There is also loss of power, the hands and arms become useless, and she can not hold things. This may so far predominate that the patient comes to be treated for a supposed paralysis. Sometimes also the patients say that the hands swell, the veins swell, etc., at the time. The symptoms pass off in a little time, and rubbing suggests itself as a natural remedy. But occasionally they manifest themselves in the daytime also, and then principally when the patient sets about her ordinary work—washing, scrubbing, needlework, etc." The author has had several cases of the affection, and his observations agree, in the main, with the foregoing description. Though mostly seen in women at or near the climacteric age, it is occasionally met with in men, in whom it is likely to be more severe and obstinate. Some attribute it to anæmia, others to gastric disturbances. All of the author's patients recovered with rest, bromide of potassium, and galvanism.

Digestive Ferments in the Urine.—Mya and Belfanti ("Ctrlbl. f. klin. Med.," 1886, No. 26) have succeeded in detecting two digestive ferments in normal human urine. One is the already well-known digestive ferment, which is active in an acid solution; the other displays its activity in an alkaline solution only. Both ferments produce only small quantities of peptone. The first ferment is found also in pathological conditions—typhoid fever, gastric cancer, and Bright's disease. The ferments have nothing whatever to do with the putrefactive processes. The detection of these ferments, the authors believe, is of considerable importance in the question of the pathological significance of peptonuria or propeptonuria.

Esbach's Albuminimeter.—P. Guttmann (*Ibid.*, No. 28) describes this instrument as follows: It consists of a glass cylinder not unlike a reagent-glass. The opening is hermetically sealed by means of a rubber cork. The tube is marked U (urine) and R (reagents), and the part under U is divided by seven lines numbered from below upward. To employ the instrument, it is filled with the suspected urine to the letter U, and there is added a solution of the reagents to fill the tube to the letter R. The reagents consist of 20 parts of citric acid, 10 of picric acid, and 970 of water. The picric acid precipitates the albumin, and the citric acid maintains the salts of the urine in solution. By gentle shaking, the two fluids are mixed, and then the tube is allowed to rest in a certain wooden cylinder. In twenty-four hours the whole of the albumin is precipitated, and the percentage can be read off by the scale. For instance, if the precipitate reaches the figure 5, then the urine contains 5 parts of albumin in 1,000 parts of urine, or 0·5 per cent.

Guttmann has been using the apparatus for over six months, and has made several experiments with artificial solutions of egg-albumin to test its accuracy. The results have been very satisfactory, and for practical purposes greater accuracy could not be desired. Should the urine contain more than 0·7 per cent. of albumin, it must be diluted with double or four times the quantity of water, and the precipitate calculated accordingly.

Miscellany.

Rabuteau's Dragees of Iron.—Iron, says the "Progrès médical," is one of the most important principles of the organism, and the only metal the presence of which is indispensable to the maintenance of life. It exists in all parts of the system, but nowhere does it acquire such importance as in the blood. (Hayem, "Recherches sur l'anatomie normale et pathologique du sang;" Leçons de thérapeutique faites à la Faculté de médecine de Paris.) The blood of a person in good condition contains about forty-five grains of iron; when this amount is diminished, a decline takes place—the appetite fails, the strength is enfeebled, and the blood loses its fine natural color and qualities. In a great number of diseases, such as anæmia, chlorosis, hæmorrhages, debility, etc., it sometimes happens that the blood has lost half its iron, and, to cure these diseases, it is absolutely necessary to restore to the blood the iron which it lacks. The problem has been to find a preparation of iron in the proper form for penetrating into the organism without unduly taxing the digestive tract or interfering with the essential qualities of the gastric juice. (Ch. Richet, "Du suc gastrique chez l'homme et les animaux," Paris, 1878.) Dr. Rabuteau ("Traité de thérapeutique et de pharmacologie," Paris, 1884) has solved the problem by preparing dragées containing iron in such a state that it is unnecessary for the stomach to act upon it before it enters the circulation. Each of these dragées contains exactly twenty-five milligrammes (about four tenths of a grain) of a chemically pure ferrous salt. The ingenious apparatuses devised by Potain, Hayem, and Malassez for examining the blood microscopically (Robert Moriez, "La chlorose" (Thèse d'agrégation), Paris, 1880), have enabled physicians to study the therapeutical value of Rabuteau's iron. Among the observations that have been published on this subject the following is full of interest: A young girl, profoundly anæmic, entered Ste.-Anne's ward in the Necker Hospital. On the 4th of December her blood, examined by Professor Potain with the *compte-globules*, contained only 2,919,000 red globules to the cubic millimetre, the normal average being about 4,500,000. She took two of Rabuteau's iron dragées every morning and evening with the meals. Succeeding examinations up to the 24th of December, ate of her discharge, gave the following results:

	Number of red globules to the cubic millimetre.
December 4th (date of admission)..........	2,919,000;
" 7th..........................	3,486,000;
" 12th..........................	3,696,000;
" 24th (date of discharge)...........	4,578,000.

The patient had therefore gained 1,659,000 red globules to the cubic millimetre in twenty days, an average of 82,950 a day. A cure had been attained, the normal number of globules having been acquired, a little less than 5,000,000 to the cubic millimetre in women. It should be added that during the whole course of the treatment the appetite was excellent, and there was neither diarrhœa nor constipation. So precise an observation demonstrates that in chloro-anæmia Rabuteau's iron regenerates the diseased red globules of the blood with a rapidity not before observed under the use of other ferruginous preparations; it adds to their physiological power, and makes them richer in coloring matter. Moreover, being neither styptic nor caustic, and having no coagulating or astringent action on the gastro-intestinal mucous membrane, this preparation of iron causes neither constipation nor diarrhœa; as it does not need to be digested in order to be absorbed, it does not give rise to the sensation of weight in the stomach, or the gastric pain and indigestion occasioned by other preparations. The therapeutical effects are rapid and energetic. In women who have not menstruated for many months the amenorrhœa disappears; in others suffering from an anæmic state of long duration, grave in proportion as the ordinary preparations of iron have not been well borne, Rabuteau's dragées, four daily, soon restore the digestive functions to their normal state. Such must be the case, since this preparation of iron does not require the intervention of the gastric juice to be rendered assimilable. In grave cases of chloro-anæmia, where the gastric juice is very deficient in hydrochloric acid, the effects are remarkable. Finally, comparative experiments and clinical observations made in the Paris hospitals have shown that Rabuteau's dragées are used with success in all cases where iron is indicated. Two should be taken morning and evening with the meals.

Professor Charcot "at Home."—Under this heading the "Lancet" prints the following translation of a passage in a letter to the "Allgemeine Wiener medicinische Zeitung," by the editor of that journal, Dr. Kraus: "My esteemed patron, Charcot, whose personal friendship I enjoy, had just returned from a holiday tour in Spain when I called upon him. Any one entering the Palais Charcot, in the Boulevard St.-Germain, fancies himself in an imperial residence; and, indeed, many a royal personage does not boast of such a palace as this. Charcot is admittedly not only the oracle of French physicians, but an authority upon medicine of the highest rank. We have so often touched upon the biography of this eminent scientist in our journal, and have told our readers so much of his insurpassable researches, that I need not now devote further words *ad majorem gloriam* of this eminent physician. Who is there among the ranks of medical practitioners who does not know Charcot and his imperishable work in the domain of cerebral disease, metallotherapy, etc.? I will not, therefore, to-day delineate him as the man of science, but as the Paris physician to whose tapestry-covered salon troops of patients make pilgrimage, and lay an obolus on the table, which groans under the weight of gold—from three to five to ten napoleons a consultation. How did I know all this if it were not that the pleasing testimony of this *aurea francogallica* practice lay piled up on the consultation table. To be sure, this modest, amiable, and highly humane French physician does not make a vain show of these offerings of esteem which his practice brings him; he simply has not time to place them under lock and ward, so rapidly does one patient press in after another. The consulting-room contains a magnificent library, which would be the envy of many a medical Universität-Bibliothek; scarcely any important work of old and new medicine, home or foreign, is wanting. Charcot, the Nestor of French scientists, reads and speaks German, and my son and myself were delightedly surprised to see lying on the consultation table the 'Allgemeine Wiener med. Zeitung,' while on our entering he laughingly asked whether we knew that journal. Charcot gave us so much of his valuable time that we felt embarrassed, because we had seen what a crowd of patients still awaited his advice in the fairy-like salon. We were proud to secure a written souvenir from him, and a promise to send a paper to our journal. He asked after all his Vienna colleagues—Leidesdorf, Meynert, Benedikt—and proved how exceptionally conversant he is with Austrian and German medical literature."

The Liebig Company's Extract of Meat is manufactured in South America by experienced men who have been in the company's service since its foundation, and under the strict supervision and control of the company's chemist, who testifies as to the quality of meat used, and analyzes and examines as to fine flavor every parcel of extract before its shipment to Europe. On its arrival at Antwerp the extract is there again examined by a special chemist attached to the company's general depot, and, as a final and decisive test, samples of every arrival in Europe are sent to Professor Max von Pettenkofer and Baron H. von Liebig, after whose approval and guarantee as regards composition and flavor the extract is potted, put up in cases, and sent out to the markets of the world. It will be seen, therefore, that every means is used to manufacture this preparation under the most favorable conditions, and that the great success of the enterprise is well merited.

The Value of Nostrums.—The "Evening Post" says: "What a commotion there would be among our patent-medicine venders if the New York police followed the example of the Berlin police, who are continually issuing warnings to the public, of which the following is a specimen: 'The tradesman, Paul Heider, of this city, Anklamer Street 28, is selling, under the name of "Harz Mountain Tea," a mixture of lavender flowers, sassafras root, peppermint, and several other plants, weighing fifty grammes. His price is fifty Pfennigs, and he advertises it as a remedy. Official analysis has shown that the real value of one of these packages is hardly ten Pfennigs.'"

The New York Academy of Medicine.—The Section in Orthopædic Surgery will meet Friday evening, the 15th inst. Dr. John F. Ridlon will read a paper on "Syphilitic Joint Disease in Children." The Section in Ophthalmology and Otology will meet Monday evening, the 18th inst. A paper entitled "A Consideration of certain Forms of Intra-ocular Hæmorrhage, with special reference to Ætiology and Prognosis," will be read by Dr. Charles Stedman Bull.

The Medical College of South Carolina.—We have received a letter from Dr. F. Peyre Porcher, of the college faculty, in which he says: "I thank you for the copy of your Journal containing the characteristic and generous letter of Professor Lewis A. Sayre. He omitted to say that he had sent me his personal check for $50, for rebuilding the Medical College, also one for $20 from Dr. R. A. Caldwell, of New York, for the same purpose."

The Treatment of Croup by Intubation of the Larynx.—Dr. J. Lewis Smith, in an article in the October number of the "American Journal of the Medical Sciences," expresses his belief that intubation is destined to be employed more generally than tracheotomy in the treatment of croup. He maintains that in all cases in which the obstruction is limited to the larynx and trachea intubation relieves the dyspnœa as quickly, effectually, and permanently as tracheotomy. It gives, in most instances, complete relief for a time. If the respiration subsequently becomes embarrassed, and no benefit occurs from cleaning the tube, tracheotomy may be required. Intubation may properly precede tracheotomy in most cases. Not a few parents, in the middle and lower classes, allow their children to die rather than consent to this operation. On the other hand, few parents will object to intubation, and when they see the relief which it produces they will probably consent more readily to tracheotomy if the dyspnœa should return. If only one of these operations is performed, statistics thus far show nearly as good a result from intubation as from tracheotomy. Now that diphtheria has become so common, the physician should be provided with the necessary instruments for intubation whenever diphtheria appears in his locality. Alkaline and trypsin inhalations, properly and almost constantly used, and intubation performed early, when the patient begins to suffer from dyspnœa, would probably prevent the necessity of tracheotomy in a large proportion of instances. But, if such treatment does not fully relieve the dyspnœa, it will in most instances so diminish it and retard the progress of croup that the physician remote from help and unfavorably situated for the performance of tracheotomy will have ample time to prepare for this operation. Intubation may prevent the need of tracheotomy, but, if not, it presents no hindrance to it.

The Transmission of Yellow Fever by the Culex Mosquito.—In the October number of the "American Journal of the Medical Sciences" Dr. Charles Finlay, of Havana, maintains that yellow fever is not spontaneously transmissible by infection through the air by contact, but that it may be artificially communicated by inoculation, and only becomes epidemic when such inoculations can be accomplished by some external natural agent, such as the mosquito. The history and ætiology of yellow fever exclude from our consideration as possible agents of transmission other blood-sucking insects, such as fleas, etc., the habits and geographical distribution of which in no wise agree with the course of that disease; whereas a careful study of the habits and natural history of the mosquito shows a remarkable agreement with the circumstances that favor or impede the transmission of yellow fever. So far as Dr. Finlay's information goes, this disease appears incapable of propagation wherever tropical mosquitoes do not or are not likely to exist, ceasing to be epidemic at the same limits of temperature and altitude which are incompatible with the functional activity of those insects, while, on the other hand, it spreads rapidly wherever they abound. From these considerations, taken in connection with his successful attempts in producing experimental yellow fever by means of the mosquito's sting, it is to be inferred that these insects are the habitual agents of its transmission. It can not be denied, however, that other such agents may and probably do occasionally occur, but, as they are not endowed with the same facilities for rapid and extensive operation, their influence becomes insignificant as compared with the action of the Cuban culex.

The Health of Boston.—During the week ending Saturday, October 2d, there were 181 deaths, of which 7 were from diphtheria, 4 from scarlet fever, 8 from typhoid fever, 27 from consumption, 5 from pneumonia, 2 from whooping-cough, 2 from heart disease, 2 from bronchitis, 16 from marasmus, and 3 from violent causes, including one case of drowning.

Insanity and Crime.—Dr. Richard J. Kinkead, in the October number of the "American Journal of the Medical Sciences," discusses at length the relation of crime to insanity, and controverts the views expressed by Lord Bramwell in a late number of the "Nineteenth Century." Dr. Kinkead believes that madmen who have committed criminal offenses should be sent to an asylum. If an insane man commits homicide, he should be confined in an asylum for life; the protection of society demands this, not only to guard against a repetition of the act by the lunatic himself, but to prevent simulation of insanity by the sane. Imprisonment for life with lunatics would be to the sane far greater punishment than penal servitude—to many, worse even then death. For less offenses he should be confined in an asylum till cured. To punish a man for having a disease, or for the acts which his disease compels him to do, is unjust. To remove a madman to a place where his disease will be properly treated, and where he can not injure others, is just, politic, and humane. Penal discipline is injurious to the insane; lunatics can not be kept in prison; not only because it is detrimental to them, but because their presence is subversive of discipline, and a constant danger to the other prisoners and to the officers. Whether a man is mad or not can be decided only by those who have experience of insanity—that is, by experts. The law as it stands, Dr. Kinkead holds, is a wrong law; it tries to define what is indefinable; to create a disease which does not exist; it withdraws from the jury matter of fact, and establishes tests which experience has shown to be utterly fallacious. Lord Bramwell thinks it hard to say why lawyers, generally supposed sharp enough, should go wrong on this particular subject. The answer is simple: their education and training have not fitted them to deal with it. Versed in metaphysical lore and legal subtleties, they have not studied physiology or pathology, nor acquired experience of the insane; just as no amount of book learning alone will enable a physician to deal with sickness, or a surgeon to operate; so no mere mental philosophy or legal training will enable a lawyer to grapple with the paradoxes of insanity. If lawyers were obliged to spend six months in an asylum studying mental diseases, they, too, would be quite as anxious as doctors are that the law should be changed, and would be just as convinced that it is wrong as Lord Bramwell is that it is right. Nor would they fall into the error of considering madness not a disease of the body; for, whether we look upon mind as the product of the brain or merely working through it, it is disease, functional or organic, of the organ, which is either its origin or instrument, that constitutes madness.

Apothecaries and Physicians.—Dr. Hodges says, further: "No safeguard can ever entirely prevent the fatal mistakes and accidents of both druggists and physicians which arise from imperfectly written prescriptions, or carelessness in the handling of medicines. The business of the druggist is a large and important industry, demanding the best intelligence, and nothing should be done to impair its efficiency. It is remarkable that grave errors are not more frequently made. Every physician has had reason, probably on more than one occasion, to thank the acute oversight and the good judgment of some careful apothecary for the detection and sagacious counteraction of blunders in prescription-writing. As the dealer in medicines bears the burden of this important supervision, let him not be condemned if he occasionally prescribes chalk-mixture, or bromide of potassium, over his counter."

The Stomach and Doctors.—In the same discourse Dr. Hodges says: "It is useless to humor or to tease with restrictions the capricious digestions of those who argue over every mouthful of their food instead of swallowing it, and whose gastric neuralgias and low level of health are dependent on the defective general condition of their bodies. An eminent modern physician has declared that 'he never knew a dyspeptic get well who undertook to regulate his diet'; and the stomach, we are told—like a school-boy—is sure to get into mischief unless constantly occupied. If it behaves perversely, therefore, the doctor must conquer the stomach and not the stomach the doctor."

THERAPEUTICAL NOTES.

The Hypodermic Use of Formamide of Mercury.—Kopp ("Vtljrssch. f. Dermat. u. Syph."; "Union méd.") has treated a hundred and twenty-six syphilitics with subcutaneous injections of this preparation of mercury, giving each of them twenty-five injections, one injection usually containing fifteen one-hundredths of a grain of the formamide. Ninety-two of the patients were cured, and in only thirteen cases was the treatment unsuccessful. The writer states that the injections are not applicable to the graver forms of syphilis, but rather to the mucous syphilides; it is probably worthless in the treatment of tertiary affections and as a means of preventing the return of the manifestations.

Hypodermic Injections of Solutions of Iron.—Hirschfeld ("Bull. gén. de thérap."; "Lyon méd.") asserts, as the result of his experience, that such injections are not only painful, but useless. There is no preparation of iron, he thinks, that fulfills all the requirements of a hypodermic solution.

Cocaine in the Vomiting of Pregnancy.—Boin ("Lyon méd.") has obtained a gratifying result by applying to the cervix uteri, night and morning, a tampon smeared with an ointment containing two per cent. of cocaine hydrochloride.

The Treatment of the late Ocular Manifestations of Syphilis.—Abadie ("Bull. gén. de thérap.") discusses under this title a form of parenchymatous keratitis which resists the ordinary anti-syphilitic treatment, but is favorably affected by hypodermic injections of the following solution:

Corrosive sublimate	1 part;
Common salt	2 parts;
Distilled water	100 "

Twenty drops are to be injected deep beneath the skin of the back every two days. To mitigate the pain of the injection, a solution of cocaine may first be used. An improvement will be observed after about the twelfth sitting. The same treatment is applicable to syphilitic choroiditis, paralyses, neoplasms of the optic nerve, etc.

Hypnone.—Magnieu ("Thèse de Lyon"; "Lyon méd.") discusses the properties of acetophenone, more commonly known as hypnone. He has sought to test the statements of Dujardin-Beaumetz, Laborde, and others, who attribute marked hypnotic properties to the drug, and concludes that, unless given in poisonous doses, it has no such properties. In toxic doses it produces coma, but not physiological sleep. In small doses it accelerates the pulse, but diminishes its volume; afterward it paralyses the heart, acting upon its muscular substance. [It is to be noted that the author's experiments were not checked with clinical observations, as was the case with Dujardin-Beaumetz's.]

The Prevention of Mercurial Stomatitis.—The "Union médicale" gives the following formula:

Potassium chlorate	6 drachms;
Powdered cinchona, Powdered catechu, } each	1½ drachm;
Prepared chalk	2½ drachms;
Tannin	15 grains;
Essence of mint	5 drops.

By rubbing the teeth and gums with this powder morning and evening, the stomatitis which follows the prolonged use of mercury may often be prevented.

Original Communications.

THE QUESTION OF HÆMORRHAGE FOLLOWING UVULOTOMY.[*]

Report of Twenty-three Cases of Obstinate Uvular Hæmorrhage; Description of a Uvular Clamp; Bibliography.

By ETHELBERT CARROLL MORGAN, A. B., M. D.,
WASHINGTON, D. C.

The operation of uvulotomy, so often performed and attended with insignificant after-trouble, may in rare instances be the cause of anxiety by reason of persistent primary or secondary hæmorrhage. "Clipping the uvula" is with some practitioners an operation practiced upon patients suffering from almost any disease of the upper air-passages. We should never under-estimate the liability to annoying and even alarming complications in this simple operative procedure, and should be prepared to promptly check all bleeding. Most authors briefly dispose of the question of hæmorrhage following uvulotomy by saying that such hæmorrhage is usually unimportant, and can always be readily controlled by the use of styptics—notably the gallotannic acid of the London Throat Hospital Pharmacopœia. Following I give the opinions upon this subject of leading authors from 400 B. C. to 1886 A. D.:

Celsus[†] says: "If the uvula descends, accompanied with inflammation, pain, and redness, it can not be excised without danger; for it is likely to discharge a large quantity of blood."

Rhazes[‡] states "that when the uvula is enlarged, but is not red, the operation may be performed without danger. He mentions that some preferred the actual or potential cautery, but that he preferred excision."

Guidon[#] mentions "that after excision of the uvula, if the bleeding should be excessive, dry cups must be applied to the back of the neck, as proposed by Avicenna, troches of amber with plantain-water administered, and the patient should be placed upon his face and told to expectorate in order to free his throat from blood, for, if any of the blood should descend, it might be the end of him."

Ravaton[‖] says: "The wound bleeds, but the hæmorrhage is slight, and is stopped by gargling with fresh water."

Nich. B. Waters[△] says: "When the uvula is much enlarged, or there would be danger of considerable hæmorrhage from the use of the knife, the ligature should be preferred."

Benjamin Bell[◊] says: "By excision, troublesome hæmorrhages sometimes occur. Some practitioners indeed allege that no danger can ensue from any hæmorrhage that takes place from the removal of the uvula by excision; but, although this may frequently happen, yet I know from experience that instances of the contrary sometimes occur, and that large quantities of blood have been lost by this operation. This will most readily happen when the uvula is much enlarged. It will seldom happen, however, that any precaution [use of astringents] of this kind is necessary; for a moderate flow of blood will never do harm."

It is my opinion that the views of Benjamin Bell possess an accuracy worthy of the year 1886. His statements made in 1804 are in every way verified by my investigations today.

Desault[*] says: "It is seldom that a troublesome hæmorrhage results from the excision of the amygdalæ or uvula."

Liston[†] says: "The connections [hypertrophy] may be such that the extirpation can not be attempted without great risk from hæmorrhage."

Gibson[‡] quotes Benjamin Bell's remark about bleeding, and adds "that he had often operated, and never met with such an accident."

Troschel[#] says: "The precautions against a severe bleeding are the same as in operations on the tonsil."

Dieffenbach[‖] says: "Bleeding is stopped with cold water. If more severe, powdered alum may be applied with a spoon; but I never found it necessary."

H. H. Smith[△] says: "Whenever there be any hæmorrhage of consequence, touching the end of the stump with silver nitrate will generally arrest it."

Demounilliers[◊] says: "The flow of blood resulting from the little operation usually stops of itself, or by the aid of an astringent gargle."

Gross[↧] says "that no hæmorrhage, properly so called, need ever be looked for."

Gross[↕] says "that no hæmorrhage need be looked for, nor is the excision attended with any great pain."

Gayraud[⇞] says: "Hæmorrhage is usually trifling; once Voss[**] saw it last all night. Where there is varicose development of the uvula, the bleeding may be considerable. Ancelor had to use in one case perchloride of iron, and in another the actual cautery. Voss preferred silver nitrate."

Mackenzie[††] says: "Occasionally severe and continuous hæmorrhage follows the little operation, but it can always be checked by slowly sipping a teaspoonful or two of the tannogallic gargle."

Cohen[‡‡] says: "The bleeding after excision of the uvula is usually insignificant; but occasionally it is quite profuse."

Browne[##] says: "If the patient be directed, after the operation, to sit perfectly still without washing the mouth, hæmorrhage but seldom occurs; should it happen, the sipping of a few drachms of a saturated solution of tannin will speedily check it."

Bosworth[‖‖] says: "After the operation the hæmorrhage is slight, as a rule, and the wound heals kindly in the course of a few days or a week."

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[*] Read before the American Laryngological Association at its eighth annual congress.

[†] Lib. vii, cap. xii, par. 3. Lee's Translation, London, vol. ii, 1836, p. 278.

[‡] Contin., vii, and divis. i., 49. See "Paulus Ægeneta," Book VI, Lect. xxxi. Adams's Translation, London, vol. ii, 1846, p. 300.

[#] "Chirurgia magna," Leyden, 1585, p. 330.

[‖] "Chirurgie," Paris, i, 1776, p. 264.

[△] "System of Surgery," Philadelphia," 1802, p. 317.

[◊] "Surgery," Am. edition, Troy, N. Y., 1804, ii, p. 351.

[*] "Surgery," Philadelphia [Translation], 1814, i, p. 198.

[†] "Practical Surgery," London, 1838, p. 205.

[‡] "Surgery," Philadelphia, 1838, ii, p. 29.

[#] "Chirurgie," Berlin, 1839, i, p. 227.

[‖] "Operative Surgery," Leipsic, 1848, ii, p. 94.

[△] "Operative Surgery," Philadelphia, 1852, p. 181.

[◊] "Compendium de chirurgie," Paris, 1852–'61, iii.

[↧] "Surgery," Philadelphia, 1859, p. 651.

[↕] "Surgery," Philadelphia, 1872, ii, p. 553.

[⇞] "Dict. Encycl. des sci. méd.," xix, p. 698.

[**] "Norsk. Mag. f. Lægevidensk," 3 R., vii, 1877, p. 77.

[††] "Diseases of the Pharynx, Larynx, and Trachea," Philadelphia, vol. i, 1880, p. 41.

[‡‡] "Diseases of the Throat," N. Y., 1879, p. 219.

[##] "The Throat and its Diseases," Philadelphia, 1878, p. 129.

[‖‖] "Diseases of the Throat and Nose," N. Y., 1881, p. 96.

Sajous* says: "A ten-per-cent. solution of cocaine, applied just before the operation, renders it almost painless, and prevents the slight bleeding which usually occurs."

Seiler† says: "The pain and hæmorrhage in this operation are very slight; indeed, not infrequently altogether absent."

Schech‡ says: "The wound heals in a few days without much pain."

He does not mention hæmorrhage in connection with uvulotomy.

Obstinate hæmorrhage following uvulotomy is a rare accident, and has never occurred in the Metropolitan Throat Hospital, New York,# during ten years, and in over one thousand uvular operations. It has never happened in the Central London Throat and Ear Hospital,‖ and numerous other institutions in this country and Europe.

My experience up to this writing accorded with the views of the majority of the authors quoted above; but I certainly think the cases reported to-day would suggest the exercise of a little caution on the part of the enthusiastic uvulotomist. Moreover, a slight modification of existing opinions and generally accepted teachings may be demanded, as the result of the indisputable records furnished us by medical literature. Many operators are not content with excising the prolapsed portion of the uvula, but essay to remove all traces of the existence of this inoffensive little organ, thus unnecessarily increasing the danger of hæmorrhage, especially if great hypertrophy exists. The gentleman concerned in my report had been subjected to total excision, had been bleeding copiously at intervals during a period of five days prior to his application to me for relief, and was in a distressing state of body and mind.

Mr. V. A. H., aged twenty-eight, applied to me on March 24, 1885, stating that his uvula had been excised five days previously, and that, four hours after the operation and at short intervals since, he had experienced abundant hæmorrhage, for the control of which powdered iron persulphate, Monsel's solution, ice, alum, silver nitrate, gallo-tannic acid, and other styptics had been employed without success. He was greatly excited and anxious; his face pale, hands cold, and pulse weak. Upon cleansing the parts and examining them by reflected light, two bleeding points, situated respectively near the anterior and posterior portion of the uvular stump, were visible, and occasioned a rapid and continuous dropping of blood upon the tongue. The stump left after the operation was with difficulty detected, as the mucous membrane and submucous tissues appeared to have retracted, leaving the azygos fasciculi uncovered. The uvula of Mr. H. had been greatly hypertrophied, as was fully proved by the broad, hard stump left after amputation. He informed me that the forceps and scissors were employed in operating. There was no hæmorrhagic diathesis in this patient, nor in any member of his family, and several of the latter had undergone surgical operations without experiencing any untoward consequences. I first removed the firm coagula of blood and iron persulphate which covered the hard and soft palate, pharyngeal walls, teeth, and tongue. The parts mentioned and the uvula were then cleansed by means of an alkaline spray and dried with absorbent cotton. The stump was firmly seized with a dressing forceps and continuous pressure exerted, but the hæmorrhage was only partially controlled, as the patient could not tolerate the instrument for any length of time. The galvano-cautery blade, at a cherry-red heat, was freely applied to the bleeding surface, and the hæmorrhage was promptly controlled. An hæmostatic of ext. ergot fl. ʒ ss, acid. sulphuric. aromat. ♏xx, tr. opii, ♏xv, was ordered to be taken in water every three hours. He was directed to take his food in a liquid state and cold, and to refrain even from talking, using a writing tablet for necessary communication. The hæmorrhage recurred within nine hours, when the cautery was again successfully used and the stump dusted with powdered iron persulphate. He came to my office at 11 P. M. the same day saying he was bleeding, but examination proved only the presence of a firmly adherent coagulum, which I did not disturb. The following morning at eight o'clock, or the sixth day after the uvulotomy, a copious dripping of blood took place; strange as it may appear, by actual measurement, not less than a fluid-drachm flowing in a minute. The entire throat was again thoroughly cleansed and dried, and a careful rhinoscopic examination for the second time made to discover if the hæmorrhage could possibly proceed from the naso-pharynx, or from some pharyngeal vessel wounded during the performance of the original uvulotomy. The naso-pharynx and superior surface of the velum palati were free from blood and uninjured, showing that the abundant hæmorrhage proceeded from the uvula alone, incredible as it appeared. Melted crystals of chromic acid were applied to the stump and the hæmorrhage was again checked. This state of affairs did not continue long, for at three o'clock of the same day persistent and copious bleeding recommenced. The stump was again subjected to the galvano-cautery, but the bleeding continued. An effort was made to transfix the base of the uvula by double suture (see Fig. 1), but there was insufficient stump to hold even a silk or silver thread. All ordinary methods having been exhausted without avail, and as I could not possibly ligate so short a uvula, I hoped to attain my purpose by

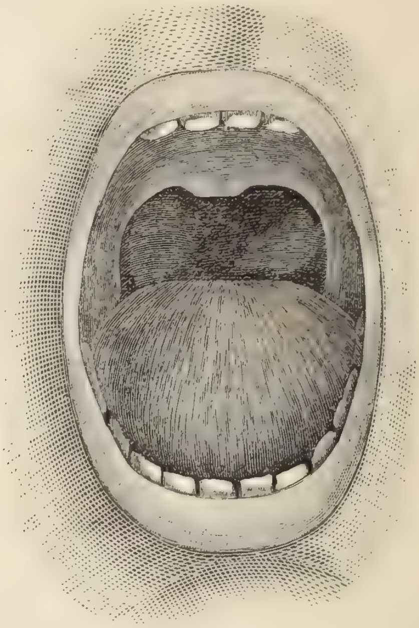

FIG. 1.

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* "Diseases of the Nose and Throat," Philadelphia, 1885, p. 298.

† "Diseases of the Throat, Nose, etc.," Philadelphia, 1883, p. 185.

‡ "Diseases of the Mouth, Throat, and Nose," Blaikie's transl., Edinburgh, 1886, p. 129.

# Personal communication from Dr. G. B. Hope.

‖ Personal communication from Mr. Lennox Browne, F. R. C. S.

torsion, or compressing the arteries and veins concerned. The first was tried to no purpose, but the second completely and permanently checked the hæmorrhage, although obtained in a novel manner. One of those small spring clamps used in retaining shirt-sleeves in position, and which can be purchased at any furnishing-store, was trimmed down with shears, the spring weakened, and a string attached to a perforation made in one of its arms. The arms of this improvised instrument were widely separated by means of a dressing forceps, quickly slipped over the uvula and well up on the soft palate; the forceps was withdrawn and the clamp remained securely fastened and in the desired position. The teeth of the clamp had been slightly filed down prior to introduction, and the string attached to the instrument was secured on the forehead of the patient. The upper portion of the clamp grasped and compressed the soft palate in the median line, and about one sixth of an inch above the point at which uvulotomy had been performed (see Fig. 2). The clamp was allowed to exercise pressure for several hours, when it was removed temporarily in order that the patient might take nourishment. It was, however, never necessary to replace this little device, which accomplished so thoroughly and rapidly the end for which it was employed.

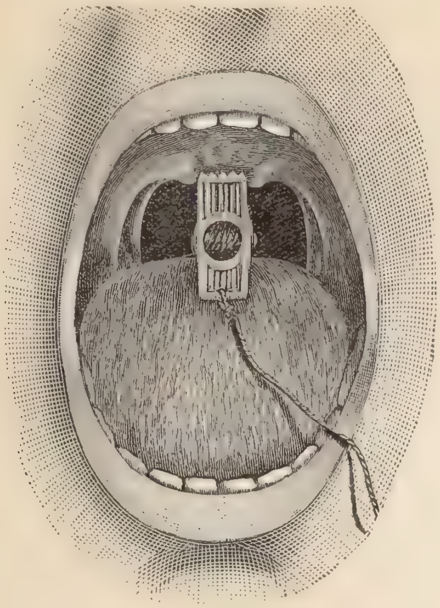

FIG. 2.

After a laborious search through laryngological literature, I have failed to find that any device similar to my clamp has ever been suggested or employed for the purpose of controlling uvular hæmorrhage. Dr. Löri,* of Budapest, is reported to have used a miniature instrument shaped like a "paper-clip" to seize and draw the velum forward during the performance of posterior rhinoscopy. I have modified my clamp during the past year, and several instrument-makers — among them Snowden, of Philadelphia—have endeavored to improve upon the original clamp, but thus far without success.

Malgaigne † says "that on one occasion, after Lisfranc removed the uvula, there was an alarming hæmorrhage. Astringent gargles, ice, and cauterization with nitrate of silver, were all tried and failed. Lisfranc then took the end of the uvula between the branches of a pair of ordinary forceps, and applied nitrate of silver to the wound rendered bloodless by the compression; this succeeded as if by magic, no more hæmorrhage occurring."

Gueneau de Mussy * mentions the case of an old man whose uvula he had partially excised to relieve sudden suffocative seizures caused by an hypertrophied uvula as large as the little finger. The operation demonstrated that there was thickening of all the tissues, and a large gaping artery spurted blood from the center of the wound at considerable distance. The hæmorrhage ceased after compression by the forceps and the use of astringent gargarisms, but during the day returned with such violence that the patient filled a wash-basin, holding sixty-four ounces, with blood. The actual cautery was then applied to the bleeding surface and the hæmorrhage permanently checked.

Dr. E. Fournié † reports a case of hæmorrhage following uvulotomy in an abbot superior of a seminary. He does not state the patient's age. The throat was uniformly red; mucous membrane swollen and everywhere thickened. The uvula was also prodigiously enlarged, measuring 2½ by 1½ ctm., and the tissues were hard. Silver nitrate in solution was applied daily, and then about half of the uvula was excised (using a grooved forceps with curved scissors). There was no bleeding and no acute pain, the surface was cauterized with a mild solution of silver nitrate, and the patient instructed to gargle with vinegar and water. Four hours afterward the patient was found to be and to have been losing blood from the cut surface. It escaped drop by drop, and almost by jets, and was arterial. Perchloride of iron was applied and held against the bleeding part, but the bleeding recurred. The uvula was then grasped with the dressing forceps, perchloride of iron being still applied. On removal of forceps, the bleeding again recurred. A nasal polypus forceps, slightly curved at its ends, and broad enough in the bite to compress the entire remainder of the uvula against the palatine vault, was next applied, for twenty minutes. No bleeding then taking place, the patient attempted to walk to his room, but fainted. He was soon revived by cordial, and no more bleeding occurred.

Spagnolo ‡ reports a case of persistent hæmorrhage after uvular excision occurring in the practice of Dr. Zambaco, of Constantinople. The resulting hæmorrhage was by some held to be responsible for the death of the patient under a "*post hoc ergo propter hoc*" species of reasoning. The patient had long suffered with inflammation of the throat, increased by every change of temperature. Dr. Zambaco, of Constantinople, Louis, Andral, Ricord, and Tardieu were consulted in this case. Zambaco and these eminent Parisian physicians recommended excision of the uvula. Zambaco cut it off with scissors. A slight bleeding followed, but ceased after gargling with cold water. Four hours later bleeding recurred, and ceased when iron perchloride was freely applied. Next day there was gastric cramp, with intestinal colic, and bloody stools. The perchloride was again applied to the wound and bleeding stopped. The patient was very anæmic. An intense diarrhœa supervened subsequently, and he died eight days after the operation. The reporter says that the patient wore an artificial denture, taking it out at night, and he thinks that the habit of suction acquired by those who wear the dentures produced the hæmorrhage. There is a question whether so much bleeding from the bowels could have originally come from the uvula through the swallowing of blood. There was no autopsy to show the real cause of death.

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* Voltolini, "Rhinoscopie und Pharyngoscopie," 1879, p. 17; see also Mackenzie, *op. cit.*, vol. ii, p. 252.

† "Revue méd.-chir.," Paris, ii, 1847, p. 340.

* "Traité de l'angine glanduleuse," Paris, 1857, pp. 75, 76.

† "Revue méd. franç. et étrang.," 1884, i, p. 437.

‡ "L'Union méd. d'Orient," Constantinople, No. 24, 1880; also "London Med. Record," 1881, ix, p. 24.

Carlo Labus's cases[*]: "The first case was a contractor, aged thirty, of robust constitution, who had been suffering for three years with a dry, irritating cough, caused by an elongated uvula.

"The hæmorrhage which followed the operation, and which in several hours had nearly ceased, recommenced toward evening and steadily increased.

"The next day, the hæmorrhage continuing, I employed a spray of the tr. chloride of iron, which arrested momentarily the bleeding, but it soon began again. I then touched the cut surface with a crayon of silver nitrate, but without success. Finally, by means of the galvano-cautery, I arrested the hæmorrhage. As a predisposing cause, I can only cite the plethoric constitution of the patient. The operation was performed by means of the scissors.

"The second case was a man of fifty years, and, like the former, of good health. I performed uvulotomy on account of a chronic pharyngitis.

"The blood continued to flow drop by drop (notwithstanding the application of ice) for three days, yet the patient suffered no great inconvenience. This operation was also performed by means of the scissors."

Dr. Felix Semon's case[†]: "A man of fifty-five, strong, and of florid complexion, was operated at St. Thomas's Hospital, London, for a long and very thick uvula, which apparently produced an incessant dry cough.

"The hæmorrhage was primary, lasting from 3 P. M. until 6 A. M. next morning, was rather considerable in quantity, and was of a parenchymatous character.

"The bleeding stopped spontaneously, after all possible local hæmostatics (alum, tannin, iron perchloride, gallic acid, ice, galvano-cautery at dull-red heat) had failed.

"The man stated that he had always bled considerably when slight operations (extraction of teeth, etc.) had been performed on him, and that he was sometimes subject to epistaxis, but no definite history of hæmophilia, either in him or in other members of his family, could be elicited.

"M. Mackenzie's uvulotome was the instrument used, and the cough was not relieved by the operation."

Dr. Morell Mackenzie's case[‡]: "A man of about sixty years was operated for an elongated (not broad) uvula by means of a special form of blunt-pointed scissors. The bleeding was primary, and lasted from twelve noon until nine that night, and from one to two pints of blood must have been lost. Ice and the electric cautery were tried in vain. Attempts were made to tie the stump; but the ligature always came off. The hæmorrhage finally ceased of its own accord. I could see no particular cause for the bleeding. This is the only case I have ever met with, and it occurred in 1865 or 1866, before I was acquainted with the efficacy of a mixture of gallic and tannic acids, when swallowed, in checking all bleeding from the throat."

J. H. Hartman's[#] cases: The first patient was a female, twenty-six years of age, upon whom uvulotomy was performed with Elsberg's uvulatome for elongation. The hæmorrhage was primary, lasted all day, and was finally controlled by the galvano-cautery. There was no assignable cause for the bleeding, which was arterial.

The second patient was a man of thirty-five years, also operated for an elongated uvula by means of Browne's uvula scissors, and in whom the bleeding was secondary. It was checked in three hours by applications of iron subsulphate. Bleeding arterial.

Dr. Hartman also sends the record of a patient who bled copiously for one hour succeeding operation.

Dr. D. Bryson Delavan,[*] of New York, reports the following case: "A male patient, aged forty-five, married, and an American, was operated on for elongation of the uvula. This elongation caused distressing paroxysms of cough (particularly upon his lying down), as well as insomnia, vomiting, great general disturbance, and pharyngo-laryngeal irritation. The hæmorrhage was primary, lasted about four hours, the patient becoming pale and pulse weak, probably as much from nervousness as from loss of blood. The actual amount of blood lost is unknown. Silver nitrate applications controlled the hæmorrhage. The patient was excited at the time of operating, and the vessels of the uvula and pharynx were congested. He died six months later from chronic interstitial nephritis. The instrument employed was Elsberg's ring uvulatome."

Dr. D. N. Rankin's cases[†]: "The first case was a male, aged thirty, a resident of Alleghany, Pa. He had, for several months previous to calling on me for advice, been troubled with an irritable cough, without expectoration. This was early in 1884. Upon examination of the throat, I discovered an extensive elongation of the uvula, sufficient to cause the cough, and advised abscission to relieve it. The operation was done with the uvulatome, after which I prescribed an astringent gargle. The operation was performed about 2 P. M. In the evening, about six o'clock, the patient hurriedly sent for me. When I arrived at his home he was bleeding quite freely from the excised uvula; the cut surface was touched with solid nitrate of silver, it failing to check the bleeding. I then advised him to keep a piece of ice to the bleeding point. Hot water was used; an attempt to use the galvano-cautery was made, but, as is usual when you want to use the cautery in an emergency, it does not work satisfactorily. With the Monsel's solution and ice the hæmorrhage, after continuing incessantly for thirty hours, was checked. As to the amount of blood lost it was impossible to ascertain, as he doubtless swallowed a large quantity of it. No pulsation in the uvula was noticed, else I would most certainly have ligated the uvula near its base. No hypertrophy, merely elongation. No hæmorrhagic diathesis."

"The second case was a male, aged about thirty-five years, a resident of Alleghany. When he presented himself at my office he was suffering from difficult breathing. Upon examination of the throat, I discovered great œdema of the uvula. It was at once scarified. This giving him no relief, it was almost entirely abscised with forceps and scissors. Little hæmorrhage occurred immediately after the operation, which was made about 2.30 P. M. Hæmorrhage commenced next day at noon, and continued incessantly for twenty-four hours, notwithstanding ergot, internally, and astringent gargles were used. Finally, after using hot-water gargles, it was checked. I can not estimate the amount of blood lost, but it was very great."

Dr. Joseph E. White's case[‡]: "The patient was Dr. William

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[*] Personal communication to the writer from Dr. Carlo Labus, of Milan, Italy.

[†] Personal communication to the writer from Dr. Semon, of London, Eng.

[‡] Personal communication to the writer from Dr. Morell Mackenzie, of London, England.

[#] Personal communication to the writer from Dr. Hartman, of Baltimore, Md.

[*] Personal communication to the writer from Dr. Delavan, April, 1886.

[†] Personal communication to the writer from Dr. Rankin, of Alleghany, Pa.

[‡] Personal communication to the writer from the operator, Dr. White, of Richmond, Va.

M. T., of Culpepper, Va., who, in 1878, was suffering from naso-aural catarrh, with some hypertrophy and relaxation of the mucosa. The uvula was hypertrophied and elongated, and was a great annoyance from the constant tickling it caused in the throat. I clipped it about 11 A. M.; the bleeding ceased in a few moments, and he went back to his boarding-house to write to his wife. At one o'clock I went to my clinic at the City Hospital, and whilst there the doctor came in bleeding profusely, spitting up mouthful after mouthful of blood. He told me that while writing to his wife he hawked once or twice violently to dislodge some mucus in his throat, and, as a result, commenced bleeding. When I tried to examine his throat I found the blood flowing so rapidly that it was difficult to get a view of the uvula. I tried ice, the perchloride of iron, and a saturated solution of tannic and gallic acids without avail, alternated with attempts at compression with a pair of forceps (which latter made him sick whenever they were applied) for more than an hour. As he had then been bleeding profusely for more than two hours, and was much weakened by loss of blood, I resolved to try the actual cautery. As soon as the instrument was red hot I told him to open his mouth, and was in the act of burning the uvula when the bleeding suddenly ceased, and my patient collapsed in a fainting condition. From this he soon rallied, was taken home, put to bed, given a dose of ergot, and advised to continue the use of ice and the mixture of tannic and gallic acids. There was no return of the hæmorrhage afterward."

Dr. E. Brallier's case*: "William A., aged fifty-five, was operated on, October 27, 1885, for an elongated uvula, which was the cause of an annoying tickling cough. The uvula was narrow and not hypertrophied. About three quarters of an inch of the prolapsed organ was removed, a uvulatome made by Kolbe being used. The usual bleeding occurred at the time of operating, but continued until during the night, when it became both copious and alarming. The patient was finally exhausted from the hæmorrhage, which continued sixteen hours, with a loss of at least two quarts of blood. Astringents and styptics were used without avail, but compression with the forceps and cauterization controlled the bleeding. From the slight spurting and light color of the blood issuing from the stump, there is no doubt of its being arterial."

Dr. J. G. Carpenter's case†: "Male patient, aged thirty-five, operated for elongation with forceps and scissors.

"The bleeding was primary, quite copious, lasted twenty-four hours, and was finally checked by employing pressure, styptics, ice, and hypodermics of morphia and atropia.

"This patient was suffering from a chronic naso-pharyngeal catarrh, and was operated during an acute exacerbation of the same."

Dr. Carpenter states that the doctor who operated was not a graduate of medicine, and that the uvula was completely removed, which resulted in the frequent regurgitation of solids and liquids through the nasal passages.

Fatal case furnished by Dr. Meyer‡: "Erich, an earl, the son of Hakon, was on his way to Rome, but died in England from an uncontrollable hæmorrhage which resulted from cutting his uvula."#

This case probably occurred in 1035, and the foregoing is a free translation by me from the original Latin,* which I have found and which reads as follows: "Dynasta Eirikus Hakonis filius, cum itineri Romam accinctus esset, in Anglia obiit; is, secta uvula, cum sisti sanguinis nequiret, mortem appetiit."

The operator's name, the age of the earl, and other interesting data are wanting.

Dr. Baratoux's cases†: "A lawyer of fifty, of rheumatic diathesis, the subject of cardiac disease and of occasional cerebral congestions, was operated with Warren's scissors.

"His uvula was greatly elongated, reaching to the superior border of the epiglottis, which it tickled. The vessels of the pharynx were varicose. The bleeding was primary, lasted halt an hour, and was arrested by penciling with a solution of zinc chloride.

"The second case was a male, of thirty-six, operated by the galvano-cautery loop for prolapsus, and the presence of three polypi on the extremity of the uvula. Copious secondary hæmorrhage occurred, lasting three hours, and was checked finally by forceps, pressure, and zinc chloride applications.

"Third case, a female of forty, operated for an hypertrophied uvula by means of a polyptome with cold wire. Bleeding lasted several hours and was stopped by the galvano-cautery."

I decided to include Baratoux's three cases in my essay, although it is evident that neither of them possesses that interest characterizing the twenty other reports.

Dr. J. O. Roe's case:‡ "Mrs. L., aged twenty-five years, married. Has had most of the time, for several years, an irritating cough and an inclination to swallow frequently.

"Three years ago she had a mild attack of diphtheria, which left her throat sensitive to dust, damp air, etc., and she has since been hoarse quite often. An examination revealed a greatly elongated uvula, a chronic granular pharyngitis, and a chronic laryngitis.

"The uvula was quite thick and so long as to lie on the base of the tongue, and to touch the upper border of the epiglottis. I advised shortening the uvula by uvulotomy and local treatment to the pharynx and larynx. Accordingly, I removed the elongated portion of the uvula with a pair of straight uvula-scissors, having their points curved inward to prevent the uvula from slipping out on being cut. The uvula was left, after the operation, fully its normal length.

"Very little hæmorrhage followed the uvulotomy, and the patient in a short time left my office for her home. Soon after, however, I was called hastily to see her on account of profuse hæmorrhage that was taking place from the cut surface. Ice and the application of subsulphate of iron had no effect to control the hæmorrhage, and I only succeeded in arresting it by grasping quite firmly the stump of the uvula with a pair of large-sized dressing forceps.

"These were retained on the uvula for about three hours, after which there was no recurrence of the hæmorrhage."

(*To be concluded.*)

The Health of Michigan.—During the five weeks ending October 2d, according to returns received by the secretary of the State Board of Health, diphtheria was reported from sixty-nine places, scarlet fever from thirty, typhoid fever from fifty, measles from eleven, and small-pox from three.

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* Personal communication to the writer from Dr. Brallier, of Chambersburg, Pa.

† Personal communication to the writer from Dr. Carpenter, of Stanford, Ky.

‡ Personal letter from Dr. Wilhelm Meyer, of Copenhagen, to Dr. William H. Daly, of Pittsburgh, and published for the first time, with the latter's consent.

"Knytlingasaga," chapt. xvi, 1828, p. 200.

* "Scripta historica Icelandorum," etc., Hafniæ, 1842, ch. xvi, 188.

† Personal communication to the writer from Dr. J. Baratoux, of Paris.

‡ Personal communication from Dr. J. O. Roe, of Rochester, N. Y.

HEALTH RESORTS OF MEXICO.*

By HENRY D. DIDAMA, M. D.,
SYRACUSE, N. Y.

FOR the facts and opinions recorded in this paper I am indebted, as will be seen, almost exclusively to Dr. E. Below and Dr. Archibald Lawson, both accomplished physicians residing in the city of Mexico.

Dr. Below has rooms fitted up in his residence, and also at Tacubaya, in the suburbs of the city, for the accommodation of sick strangers, especially consumptives.

His opportunities for observing the effect of climate have been abundant, and his clinical experience has been great. His philosophical turn of mind will be manifest as I read from his communication.

He begins his letter by giving a detailed account of a case of consumption which occurred several years ago, where mercurials administered—not for the disease itself, but for a complication—effected a marvelous cure.

The patient was a clergyman. He had all the characteristic symptoms of phthisis florida—cough, elastic fibers in the sputa, hectic, great emaciation, hoarseness, snake-head fingers, etc.

No hope of recovery was entertained by any of the physicians who saw him in council. His restoration after mercurialization by inunction was speedy and entire. The cavity in the lung healed and all the symptoms disappeared.

The doctor now attributes the favorable result to the bacillicide potency of the mercury.

If the distinguished patient had not been a clergyman, a faint suspicion might be awakened, in the minds of those disposed to cavil, that the mercurialization achieved its beneficent success by destroying organisms other than the bacilli of tubercle. The details of the case are full of interest and deserve a place in some of our medical journals. Even before the discovery of the *Bacillus tuberculosis*, the treatment of consumption in the city of Mexico by calomel, combined or not with iodoform, had been attended with considerable success. This success, however, the doctor attributes in great part to the aseptic air of the country.

The city of Mexico, with a population of 250,000, is at the bottom of a basin sixty miles in length, and elevated 7,500 feet above the level of the sea. The protecting rim of the basin extends without break around the entire valley, and is 1,000 feet in height above it, so that, in journeying to the interesting city, the traveler ascends to the height of 8,500 feet and then goes down 1,000 feet to the lovely valley below.

The drainage of Mexico city is into Lake Texcoco, situated near the city and on a level, but a trifle below. For more than two centuries the sewage of the town has sluggishly found its way into this shallow lake which has no outlet. The stench from the clogged sewers is appalling. The multitudinous bad odors of a certain continental city are cologne in comparison. Hygienic measures are neglected in asylums and even in hospitals. Listerian and other cleanliness is ignored. And yet such is the tenuity of the air—where water boils at about 196° F.—and such is its dryness, that pyæmia, septicæmia, and hospital gangrene are practically unknown.

Cadavers in the street and dissecting-rooms, as I had occasion to notice, and even in the cemeteries, mummify without odor, instead of putrefying, as with us.

Dr. Below believes that the quality and consistence of the air of these Mexican highlands, where the largest cities and healthiest places are situated, are decidedly unfavorable to the proliferation and propagation of noxious microbes.

He suggests that experimentation with *Bacilli tuberculosis* at different altitudes and temperatures, in various cities and countries, should be made, to determine what favors, what hinders, and what arrests the growth of these micro-organisms. The suggestion is worthy of practical attention.

I give a few of the doctor's thoughtful deductions:

1. Tuberculosis is a septic process on a cellular tissue, tender, and vulnerable from heredity.
2. The aseptic air of Mexico gives the best chances for a favorable progress and termination of this septic process.
3. Even if the hereditary state is not influenced by the air of the Mexican highlands, the *new* septic process is *surely cured* if promptly subjected to the influence of the aseptic air and antiseptic remedies.
4. Without any antiseptic remedies, a short stay in the Mexican climate suffices to remove the infectious character of the sputa, except in inveterate cases.
5. The fever following hæmorrhages is arrested sooner than in northern climates, where the air is thick and damp.
6. Hopeless patients brought from the North experience mitigation of their sufferings and better enjoy their last months of living.
7. Tubercular consumption is not prevalent in Mexico.
8. In January, when the "northers" come, and in April and May, before the rainy season sets in, and when the air is full of dust, catarrhal pneumonia is not infrequent. At this time tuberculous and catarrhal cases are sent to altitudes lower than Mexico city.
9. The "*tierra templada*"—the table-land, where the larger cities are—ought to be chosen for tuberculous patients.
10. The highest location—"*tierra fria*"—and the low, swampy one—"*tierra caliente*"—should be avoided by them.

Dr. Lawson is a young and wide-awake physician. His practice is confined mainly to American and English residents and visitors. He is a careful observer, but he has had comparatively little experience with tuberculous cases. He confesses that to him, personally, the climate is delightful. But he holds some views regarding the Mexican capital which are not in strict accordance with those expressed by Dr. Below. He looks upon the altitude of this city as too high for consumptives. The air is too rarefied, and it demands more work of the heart and lungs than is at all beneficial. The changes of temperature are also great: the mornings cool, 65°; from 11 A. M. to 3 or 4 P. M. very hot, 90° to 100°, and even 120° in the sun; the evenings very cool, and in winter cold and penetrating, down to 60° and 55°.

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* Read before the American Climatological Association at its third annual meeting.

From May to October is the rainy season, and rain may be looked for every afternoon, usually accompanied by thunder and lightning. After the rain, vapors arise, rendering the night-air not only cold but damp, and making it specially bad for pulmonary and catarrhal diseases, of which there are many in Mexico. Those who have any tendency to hæmorrhages are injured by the rarefied air, and are liable to more congestion. Nevertheless, some forms of chest trouble are benefited.

My own observations, during a visit of nearly two months in the dry season, from about the first of March, lead me to indorse some of the statements of Dr. Lawson.

It is asserted by the compilers of Mexican guide-books and veracious inventors of statistics that in the city of Mexico the temperature is never above 70° in the shade and never below 50°—making the thermometric range from the hottest day in summer to the coldest night in winter but twenty degrees. The assertion must be taken with some modification and explanation.

Water has been known to freeze on some exceptionally cold nights. The difference between the temperature in the sunshine and in the shade is remarkably great.

In the shade the thermometer might indicate but 70°, while a few feet distant, in the sunshine, the mercury would run up to 110°, and even 120°. At our low altitudes this great difference never exists. The explanation, I dare say, is that the thin air at this great altitude is not heated by the direct perpendicular rays of the sun, which pass unrestrained through it, and bestow their intense ardor upon the unprotected head of the unwary traveler.

The usual effect of passing from the glowing sunshine of the street to the cool air of the sidewalk is a succession of sneezes. Catarrhal troubles were notably and necessarily prevalent, and their persistence was a marked characteristic. I saw many poor wretches who coughed violently and who were extremely emaciated; but I am not prepared to contradict the astonishing statement, made by a patriotic hospital surgeon, that nobody dies of consumption in Mexico. Dr. Lawson kindly furnishes a list of health resorts, and describes their peculiarities and advantages. He names Puebla, Aguas Calientes, Orizaba, Tuzpan, Canabla, and some villages on the outskirts of Mexico city as being considered specially healthful.

Puebla is a large place, clean, with good hotels and Mexican doctors. Its altitude is 7,000 feet; it is accessible by rail from Mexico or Vera Cruz. Board and lodging, three to four dollars a day.

Aguas Calientes, on the Central Railway—one mile from the station—between El Paso and Mexico city, has a fine climate, good hotel accommodations, American and Mexican physicians, and an altitude of 3,000 feet, and is warmer and drier than any of the other elevated cities. Its name is derived from its famous hot springs.

Orizaba — population 20,000, altitude 3,500 feet—is warm, but not oppressively so, and damp. It is subject to "northers" in the winter. It is resorted to by citizens of Vera Cruz in the summer. In full view of it is the magnificent mountain cone, Orizaba, which raises its silvery head 18,000 feet into the heavens.

Tuzpan, on the Gulf of Mexico, about one day's journey from Vera Cruz—warm, low situation, healthy, no yellow fever, good bathing, little if any medical supervision, no railways—is probably the best resort for pulmonary troubles of all kinds.

Canabla, on the border-land between the Tierra Caliente and the high land, is a favorite resort for convalescents from the city of Mexico. It is warm, balmy, and pleasant in winter, but hot in summer. It has an elevation of 2,500 feet, and had inferior hotel accommodations one year ago and little medical supervision.

The villages of San Angel, Tacuba, Tacubaya, Chapultepec, and others in the vicinity of the capital, are all nice in their way. The air is fresh and balmy; the nights are cool. The healthful advantages of the city of Mexico are enjoyed, free from its pernicious influences and its wretched drainage.

The doctor concludes by stating that, notwithstanding the prevalence of tuberculosis and remittent fever, one with care can manage to preserve and enjoy excellent health.

Personally, I found the climate too equable to be fascinating. The days had the family resemblance of a succession of the new eighty-cent dollars coined at the Mint. Unlike the stars, they did not differ the least in glory.

A continual flood of cloudless sunshine for two weary months became as monotonous, not to say cloying, as the traditional sixty consecutive meals of boarding-house hash. But, for consumptives and all others who need thin air and a superabundance of unadulterated and undiluted sunlight, the climate of many parts of the Mexican republic can not be surpassed in the world.

SOUTHERN PINES PARK;

A NEW WINTER HEALTH RESORT.*

By A. N. BELL, A. M., M. D.

In August last, at the request of the proprietors, I examined a plot of eight hundred acres of pine woods in about the center of the State of North Carolina, which had been selected with a view to a winter health resort.

It is situated in Moore County, immediately on the line of the Raleigh and Augusta Railroad, sixty-eight miles south of Raleigh, midway between the Pedee and Cape Fear Rivers, on the summit of an extensive sandy elevation six hundred feet above the level of the sea, covered with pine forest, and known heretofore as "Shaw's Ridge." Latitude about 30° 12′ north, longitude 79° 21′ west.

Thermometrical observations taken at Manly for one year—December, 1881, to November, 1882—by Dr. G. H. Saddleson, show the mean temperatures as follows: Winter, 48°; spring, 61°; summer, 79°; autumn, 62°; annual, 62·5°. For eastern North Carolina the average temperature for a series of years is given: For winter, 46°; summer, 80°; annual mean, 69°.

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* Read before the American Climatological Association at its third annual meeting.

The average rain-fall in this region is about forty-four inches. The snow-fall is rare and slight. As observed by Dr. Saddleson during the unusually severe winter of 1883–'84, there was but a single fall of three inches that lasted but two days.

The sandy and porous nature of the soil, undulating surface, and thrifty pine growth, all contribute to an unusual dryness of the surface and, relatively, of the atmosphere. Of the actual humidity of the atmosphere, no observations have been recorded in this neighborhood. But the indications are all favorable to an unusual degree of dryness for a forest atmosphere.

The pine forest region of North Carolina, in the midst of which this proposed park is situated, begins about fifty miles from the sea-coast, extends the whole length of the State, and near the middle rises to an elevation of about six hundred feet above the level of the sea. As the elevation increases beyond the middle of the State, the pine forest gradually loses its identity by merging into mixed growth, and is finally almost lost in a great variety of deciduous trees.

This region in particular has long been distinguished for remarkable healthfulness. In Professor Francis A. Walker's charts, "U. S. Census Reports, 1870," showing the ratio of deaths from consumption to ten thousand deaths from all causes throughout the United States, in this region the estimate is from two hundred and fifty to nine hundred, the smaller number being limited to a comparatively small area, comprehending the most exclusive portion of the pine forest highlands.

Considering the special advantages of this well-chosen place, as already pointed out, it unquestionably holds a favorable relation to the very best ascertained results of mortality statistics from consumption anywhere to be found in the State, if not indeed to any elsewhere. It is equally free from malarial diseases, and, for manifest reasons, it is almost wholly devoid of the conditions which favor them.

In addition to the sandy nature of the soil and the character of the forest growth, the undulations of the surface, and two considerable brooks, which are said to be annually living, even during the most extreme droughts, greatly add to the natural facilities for conversion into a beautiful and healthful park.

The plot is crossed near the middle, north and south, by the Seaboard Air-line Railroad. The eastern side from the railroad gradually ascends to the border, where it reaches an altitude of about fifty feet. From the top of this hill an abundance of pure spring water can be obtained at a depth of forty feet, from which, by windmill or other power, it can be raised to a surface reservoir with sufficient elevation to supply all the requirements of the lower ground to the west.

On the west side from the railroad crossing the descent continues for about one hundred rods until a beautifully clear brook, with clean white sandy banks and bottom, is reached. In a central and convenient place with regard to the surroundings this brook forms a considerable basin, which, with comparatively little labor, may be converted into a swimming bath, or even into a small boating lake, with a constantly running supply and overflow. And, anon, if used wholly or in part for a bathing basin, it may be shielded from view by flowering hedges and trellised vines.

Crossing this stream, there is a comparatively abrupt ascent for about forty rods to the top of a ridge, upward of thirty feet high, which gently descends on the other side to a second brook of about equal magnitude and beauty to the one already described.

Both of these brooks take their rise from springs in higher ground on the south side, where either one, or both, if required, can be partly intercepted and utilized for an abundant pure water-supply for the western section, distributed through pipes to every cottage, displayed in fountains, and the overflow turned to account for flushing sewers and drains, descending northerly with complete removal of all wastes and avoidance of every possible source of soil pollution.

Dr. G. H. Saddleson, who has resided in Manly for several years, having gone there from Lockport, N. Y., when he was well nigh *in extremis* from pulmonary consumption and in despair, and, as he expressed himself to me, "had ceased to think he would ever be well enough to do any work again," has now regained such a measure of good health and working ability that "he really begins to think of entire recovery." He writes:

> "The soil of this region is of clear sand of a great depth, forming a layer over this country on the summit of Shaw's Ridge to the depth of over ninety feet; it does away with surface dampness, except when the rain is falling.
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> "The drainage is perfect, for, aside from what the soil absorbs of itself, the surplus is easily carried off, this being an elevation with a descent on both sides. It is a water-shed between two streams.
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> "It would seem and is true that while there are decided curative properties in a region clothed with long-leafed pine, yet there is a drawback in the fact that nearly all sections in which that species of pine abounds are of but small elevation above the sea-level, and many districts are traversed by large streams with low banks; therefore it is desirable to seek a place where the yellow pine is found on elevated ground, also away from streams or large bodies of water. Yet too great elevation is to be avoided as well as entire absence from water.
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> "While this place has superior advantages in the way of drainage and absorption of surface moisture, yet the water-supply is abundant and of the purest quality. In the small valleys are springs of the purest water issuing forth as clear as crystal, the great depth of sand through which they pass acting as a perfect filter, removing all deleterious matter. These springs unite to form brooks. Two of these of good size are found in the park.
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> "The vegetable growth is much more luxuriant along these little streams than elsewhere, and goes to add much to its beauty.
>
> "Among the attractions of the place, especially those that can be used as accessory to the cure of disease, may be mentioned:
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> "Carriage roads, which are of the best kind, being always dry, free from mud, and good throughout the year.
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> "The manufacture of turpentine and resin will undoubtedly prove of great interest to most persons who may come here; and, while of interest, it will be beneficial in a certain way, as many have received great benefit from breathing the fumes of

the hot resin as it comes from the distillery. Many turpentine distillers will be found in the immediate neighborhood, and the stiller generally takes much pride in showing the visitor the intricacies of the process.

"The famous Jackson Springs are within a few miles, and a short carriage drive will take one to this romantic locality. The waters are valued especially in the treatment of dyspepsia and allied diseases. Another half-hour's drive over a smooth but winding road, bordered on either side of its entire length by the tall, majestic long-leaf pines, brings one to a very curious geological formation, known as Paint Hill. Here is found an unaccountable upheaval of marl-bed, quite interesting, where can be gathered many curious specimens of small but rare fossils. In the valley below, quantities of petrified wood are found.

"In different places in the forest can also be found what is termed ferruginous wood — that is, wood that has been converted into iron, showing plainly the grain, and even knots as they existed in the original tree.

"Returning to the park by another route, Forest View falls upon the sight, a prominent eminence commanding extensive views.

"Within about five miles the new industry of silk culture has just begun. A large farm is devoted to the purpose. Here can be seen the interesting process of making raw silk.

"Among the trees and flowers indigenous to the locality which would prove of interest, especially to the Northern invalid, who would forget his infirmity in his admiration of them, would be first and most constantly what he could not avoid seeing—the long-leaf pines. The persimmon-trees would also attract marked attention, from being frequently studded with bunches of mistletoe; the black gum, the sweet gum, the non-poisonous dogwood, the beautiful, symmetrical tulip-tree, straight as an arrow, the sweet bay, and the beautiful evergreen holly, with its conspicuous scarlet-red berries.

"If the lover of Nature's beauties remains at the proper season, he will find flowers—such as the sweet, delicate trailing arbutus, the wonderful trumpet lily, the curious frog's bonnet, the wild honeysuckle, laurel, and many others."

In this description of trees, flowers, and other growths, Dr. Saddleson has omitted to mention the thriftiness of the grape-vine, and particularly the Scuppernong, which is admirably adapted to the formation of extensive fruit-bearing arbors and trellises, the magnificent flowering shrubs—oleanders and crape myrtles — frequently growing to the height of from fifteen to twenty feet, and completely covered with flowers; the profusion of azaleas and many other native flowering plants, filling the woods and bordering the by-ways with beauty and sweet-smelling odors, a mere catalogue of which would fill several pages.

Assuming this area of eight hundred acres sufficiently cleared, laid out in drives and foot-paths, ornamented with plants indigenous or naturalized to the climate, under the skill of an accomplished landscape engineer; the springs and brooks utilized into a plenary water-supply for all purposes, as free as air, in the promotion of health, comfort, and luxury; drainage and sewerage effected in the most perfect manner; by contemporary work to these ends from the very beginning of the improvement, I find it difficult to conceive of any other place which so eminently comprehends all of the most desirable conditions for the promotion of the purpose in view—the establishment of a genuine winter health resort.

The work of improvement has already begun. The ground is being cleared, six cottages have been erected, and fourteen others have been contracted for.

A hotel with central accommodation for fifty guests, with pavilion extensions, with as many suites of from two to four rooms each, for the accommodation of invalids and families with invalids, who appreciate the desirability of such separation, is in contemplation, and will be proceeded with so soon as the prospect justifies it.

With the ample space and exceedingly eligible sites at command, cottage sites are now offered, and buildings thereon to order, for sale or lease. But all are restricted to sanitary supervision under the direction of the company, which binds itself to a controlling interest.

For those who wish to attend religious services, Methodist, Presbyterian, and Baptist churches are in the vicinity.

Finally, with regard to accessibility. At the time of my visit I left New York by the four o'clock express train for Baltimore. On arrival at Baltimore, about nine o'clock, took passage by the Bay boat, which runs in connection with that train, for Norfolk. After supper, a good night's sleep, and breakfast, of quality, comfort, and elegance unsurpassed by any steamboat line with which I am acquainted, arrived at Norfolk—first touching at Old Point Comfort—about ten o'clock the next morning; thence by the seaboard Air-line Railroad to the place of destination, without change, arrived at midnight, thirty-two hours from New York. The time was extended, however, by long stops at Weldon, Kittrell's, and some other places, to take a look by the way. The regular time from New York, by the same route, is about twenty-eight hours; from Boston, thirty-five hours; from Philadelphia, twenty-five hours; and from Baltimore, twenty-one hours, without breaking rest in any case, the night being spent on board the steamer. From Boston and New York steamship may be taken direct to Norfolk, if preferred, connecting there with the same train as if by way of Baltimore.

HOW THE THERAPEUTIC VALUE OF OUR MINERAL SPRINGS MAY BE INCREASED.*

By CLARENCE C. RICE, M. D.,
INSTRUCTOR IN DISEASES OF THE NOSE AND THROAT IN THE NEW YORK POST-GRADUATE MEDICAL SCHOOL AND HOSPITAL.

More attention has been paid to the mineral springs of the United States and their medicinal virtues during the last few years than ever before; and this is not that we have largely developed new resources, but because there is a demand on the part of the public for this line of therapeutics. Our patients have been educated abroad, and have discovered the benefit of treatment to be derived from mineral waters before the physician himself has become aware of it. The physician meets people constantly who have spent a season at Carlsbad or Ems. In these days of rapid traveling the distance to Europe is not considered a serious obstacle to one who is willing to be at any trouble to regain his health; and as for expense, it may easily cost as much to remain at home. Just why so many thousand Americans go to European spas for their health, when nature has been so lavish with the same resources here at home, would seem at first thought difficult to explain, but a little inquiry will show that the physician rather than the patient has been at fault, and has been the cause of this vast emigration of our invalids to Europe. The owners of mineral springs and the proprietors of watering-place hotels have also been somewhat to blame, because they have not up to this time furnished the public with the apparatus for using mineral waters which can be found at European spas. There are many Americans who have been under medical care at Wiesbaden and Homburg who, perhaps, are not acquainted with a single American mineral spring, and imagine that people visit Richfield and Saratoga solely because these places are fashionable summer resorts, and not at all on account of the waters to be found there. A number of times I have heard visitors express surprise when they learned, for the first time, that many of the hotel guests were at these places for the sole purpose of taking the baths. I speak of this only to show that Americans are to-day less acquainted with their own than with European mineral springs. Saratoga means to them a place of gayety, where the water may be drank or let alone, according to one's fancy. I have talked with many people who are in the habit of spending their summers at our watering-places, and they seemed to consider the matter of drinking the mineral waters mostly in the light of a joke. They took them for no special purpose; they had little idea of their effect, but drank the waters mainly because their neighbors did, or because it was fashionable. Using the waters in this aimless, careless manner, is it any wonder that harm is done, and that the efficacy of the waters oftentimes falls into bad repute? Europeans at their spas drink the waters and take the baths as carefully, punctually, and religiously as they say their prayers, and even Americans seem wholly changed when at foreign watering-places, and they would as soon think of selecting any spring, without regard to their ailment, as of drinking the waters which had been selected for them without first consulting the physician of the place as to the proper quantity of water to be taken, and the correct time for drinking it. If Europeans were as much in the habit of visiting our springs as we are of going to theirs, I dare say they would treat our waters with the same marked respect.

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* Read before the American Climatological Association at its third annual meeting.

It is possible, too, that the value of European mineral waters, like that of some other things, is enhanced in the minds of Americans because, if not always English, they are foreign. One reason for the difference in the behavior of the American at home and abroad is that he does not appreciate home waters because they can be so easily obtained. Feeble appreciation means little faith, and lack of faith in any remedy is almost always accompanied with little or no benefit, partly from mental causes, and partly because the remedy is not given a fair trial. A voyage across the Atlantic puts an American in condition to be benefited by European waters by improving his general health. I have no idea that Ems or Wiesbaden would have so many American admirers if these springs were situated in Virginia instead of in Germany.

It does not seem worth while to enter deeply into the analyses of the various American mineral waters, nor to determine in what points they are different from those most celebrated in Europe, for I do not believe that this is, at present, the most important part of the subject for American physicians to consider. It is vastly more to the purpose that, whatever mineral spring is used, it should be employed intelligently and on scientific principles, and that the particular spring should be selected by the physician with some regard to the ailment of the patient. The patient should be under strict detailed orders from his physician; and these instructions should cover not only the manner of using the waters, but the matter of food, exercise, social life, mode of living, etc. It is in regard to these points that physicians at the European spas are most particular, and we can learn from them in this respect. Their patients are under good discipline, and understand thoroughly what the treatment is intended to do for them. Carlsbad has not a greater reputation for curing people so much because its waters are better medicinally than the Congress or Hathorn of Saratoga, as because patients at Carlsbad are under better therapeutic conditions; and the same may be said in comparing the waters of Aix-la-Chapelle and of Aix in Savoy with the sulphur waters of Richfield. Trousseau says, in speaking of the waters of Carlsbad and Vichy: "I know of no medication more perilous than that of these waters administered without reserve, without discernment, and without regard to individual conditions of health, etc."

Let us for a moment look for the factors which have tended to make European watering-places so celebrated. Are the "cures" to be credited to the medicinal properties of the waters alone? How much have habits of living at European watering-places to do with the benefit the patients derive, and what part of the physical improvement is due to a sea voyage, changes in climate and scene, and rest from business? These are pertinent questions in searching for the secret of the success of the celebrated German and French mineral springs.

First, I believe that the *mental effect produced upon a patient by the rigorous course of treatment* which is customary at German springs is very salutary, and is a factor which hitherto has not been sufficiently appreciated at our mineral sanitaria. The physician who loses sight of the value of mental medicine in any kind of practice is working at serious disadvantage, and especially in treating patients who visit mineral springs, for they are, as a rule, a peculiar class. They have traveled much, and have seen everything. They have been treated for their complaints by many physicians in many different ways, and they have long since lost all faith in medicines. They talk over their ills with each other, and are proud to relate how many different "cures" they have tried, and how little benefit they have received. Such a patient can not be cured unless his mental condition can be placed upon a healthy basis. He must be made to feel that his visit at the springs is not mere pastime, but that he has a disease which is understood by his physician, and that the waters are suited to that disease. If they are not, he should be sent to the proper springs. These patients, then, must be taken hold of in a strong manner, for there is no class of patients so unimpressionable as the one to be found at the hotel of a watering-place. They must be made to work for themselves, and in this way they will soon become interested in their recovery, and their thoughts will be upon their cure rather than upon their disease. The whole mode of life at the European spas is one calculated to impress the invalid with the idea that not only is a great deal being done for him, but that he also is doing much for himself to regain his health. There is something in this mental tonic which is very healthful.

During a visit at the French and German springs last summer, I had the pleasure of meeting many of the physicians who practiced there. I was very much impressed with the enthusiasm exhibited by these medical men in regard to their mineral waters. They seemed never tired of talking of them, and they had great faith in their curative properties. A patient quickly sees and feels this quality in a physician, and his own confidence is increased. Among American physicians I have noticed the half-hearted manner in which they advised the use of mineral springs, when it seemed that the highest praise they could pay the water was that if it was used carefully it would do no harm—"damning it with faint praise."

Another point of difference between European and American spas is in the social life. Life at Richfield and Saratoga is almost a repetition of gay New York during the season. Only a small proportion of the visitors imitate their European cousins in rising early and going to the springs for the waters, but they breakfast at the usual city hour—from eight to ten. Frequently their servants carry the water to their rooms and the invalids drink it in bed. In Europe a person is rarely so feeble that he can not be wrapped up and carried by two attendants in a Sedan chair to the spring and bath, and this is done rain or shine. I was at Aix-les-Bains one day when the rain was falling in torrents, but this did not diminish the number of people at the bath-house. The feeble patients were wrapped up head and foot in rubber blankets and carried from their hotels to the spring. One sees little of this in America. It certainly would not become popular at our leading mineral spas unless it was fashionable, and it would not readily become fashionable unless the better classes of people had the sole monopoly. The ladies who, as they themselves express it, are "literally worn out" by the season's work, and who have come to the sanitarium to regain their health and to rest, do not in the slightest degree relax their interest in society matters and dress. And the lines separating the various "sets" are as rigidly drawn in the country as in town. It is unfortunate that this should be the grade of life at our mineral springs, and that our mineral waters should be expected to cure not only gout and bronchitis, but the vices of living which occasion these diseases. The same change is needed as in a patient whom Trousseau and Pidoux thus describe: "Living in the midst of luxury, not getting up till midday, confining herself most of the afternoon to a perfumed room which the light scarcely penetrates, taking a drive in a close carriage when the weather is fine enough, living on made dishes which are made the more piquant as her appetite grows more fantastic. Next she is influenced by her passions, good or bad, sad or gay, her social and family duties—the routine of every-day little annoyances, and finally by ennui, that pest of idleness and of riches. Her appetite fails, her digestion is languid, her nervous system is exalted. She gives an endless deal of trouble to her doctor, who can do little for her and who in despair sends her to some spa. There her habits are changed in every way. She has to get up early in the morning for her water or her bath. She leads a comparatively simple life in the open air—and, without going into further details as to her changed mode of life, can you wonder if she returns to Paris cured?"

I was impressed with the simplicity of life and habit at Carlsbad. Among the hundreds of people who were waiting in line to reach the famous Sprudel, almost every nationality under the sun was represented, as could be seen by their different styles of dress. People, too, in every station of life were there, from the nobleman to the poor Pole. Side by side they drank the waters with apparently but one desire—to regain their health. They were enthusiasts. They observed to the minutest detail the instructions of their physician both as to the temperature and the amount of water they drank. Many of them were out of bed at four o'clock in the morning, in order to get the water before the great rush began; and, from conversation, I learned that some of these people retired as early as eight in the evening to get sufficient sleep before the early start. It was a little ridiculous to hear patients exalt the virtues of the spring they were assigned to, and speak disparagingly of the others, when it is remembered that the waters of Carlsbad differ from one another but slightly except as to the temperature. The greatest man in Carlsbad is the veteran of many seasons who can drink without discomfort large quantities of the waters. He is envied by all the men and women who are limited by their physicians to a single glassful. It was very evident that these people had come to Carlsbad from all parts of the world for the *waters* and for nothing else. Patients there breakfast simply on coffee and rolls, and each patient goes to a bakery, buys his bread, and carries it to a coffee-house, where he eats it. I speak of these simple details because they present such a striking contrast to the mode of life at our watering-places. At Saratoga I heard a woman say, when she was asked if she did not fear that the bountiful breakfast she was eating would counteract the desired effects of the mineral waters she had taken an hour before, that "it was hard enough to get out of bed at seven in the morning and drink the waters, and she did not propose to starve herself." She was a stout woman and had been sent by her physician to drink the waters for rheumatism and gout. Under such circumstances, is it a matter of much importance whether the waters contain a little more or a little less lithium, or whether the cathartic principle is Epsom or Glauber's salts? Physicians and hotel-keepers at mineral springs, who lay great stress upon the presence of a fraction of a grain of some valuable medicinal salt in their pet mineral water, are not looking at the question in all its different phases. We all know that there is a great deal of truth in the statement of Dr. Beale, an English writer. He says: "If patients could be induced to retire to a pleasant part of the country, where they would take moderate exercise and be free from mental anxiety, meet with agreeable society, live regularly, take small doses of alkalies, and bathe themselves for an hour or two a day in warm water in which some carbonate of sodium has been dissolved, they would receive as great benefit as by traveling hundreds of miles away and at much less trouble and expense." But, after all, such a happy combination of circumstances and conditions can not be readily found in our country, and certainly not nearer to New York than our watering-places, where all the desirable factors recommended by Dr. Beale can be at the disposal of patients, if their physicians in town and in the country will not content themselves with simply telling them how to use the water, but will also give careful instructions about eating, exercise, and habits of life generally. The amount of benefit the patient obtains and the reputation of the spring will largely depend upon these commonplace matters of living. While I found that almost all of the physicians I met at the different watering-places throughout Belgium, Switzerland, Germany, and France were fully convinced that their own spring was competent to cure every patient whose ailment came in their particular line, I also noted that these physicians did not have faith enough to believe that their waters could cure a gouty man who continued to drink wine at late dinners or reduce the weight of a woman who sat in her hotel-room all day. They order their patients to walk a great deal, and, as many of the European spas are situated at the foot of mountains, the walks are up and down steep inclines. The physicians did not lay much stress upon these outside matters of eating and exercise, and were disposed to give to the waters the entire credit of the cure. But they were giving their mineral waters a fair trial by placing their patients in the best hygienic conditions. Patients, too, were educated to believe that the *waters* were the sheet-anchor upon which they were to depend. They walked many miles to digest the waters and make room for more. They ate only the simplest varieties of food, because all luxuries were incompatible with the chemical action of the salts, which were to revolutionize their disordered bodies, and they went to bed early only for the sake of being able to drink the waters at the most appropriate time—at day-break. Is it any wonder that the majority of patients who visit these springs and who have led the sedentary lives common to the inhabitants of cities improve on such a regimen and return to the same watering-place whenever they are out of health, believing that it is the only spot on earth for them? We were almost going to say that their improvement under these conditions would be as pronounced if there was nothing but Croton water to drink and bathe in, but this would not be true, for many of the European waters are wonderful.

The social life I have spoken of, which is common to our watering-places, *shuts out the real invalid*, who must be away from noise and gay, active life; and many of these people go to Europe.

While I believe that the majority of visitors at European spas are to some extent invalids, Dr. George E. Walton says, in his excellent book on "The Mineral Springs of the United States," that "many, and in this country perhaps the majority, of visitors at springs journey thither not because of any specific malady with which they are afflicted, but to obtain relief and rest from the harassing care of business." It has come to be believed that, while our springs are good for healthy people, they have not sufficient virtue to cope with organic diseases. This feeling has come about, not from a lack of waters in the United States whose analyses show them to be equal to those abroad, but because of the inefficient manner in which they have been employed. It will readily be seen that the comparison between our waters and those of the Old World can never be a fair one to us until we follow the example of our profession across the water and place our patients under all the conditions most favorable to health.

Another feature, which up to this time has been wanting, and which our mineral springs sorely need to give them reputation and efficiency, is the *indorsement of the medical profession*. And I do not mean subscribing to the advertisement of any company who are bottling the waters of some spring, but physicians, individually or in committees appointed for the purpose, should have careful analyses made, and they should ascertain by clinical investigation the therapeutical value of our mineral waters, and, if they are found to be valuable medicinal agents, they should be given a place as such in our materia medicas. This is another advantage that the European springs have had. Mineral-water treatment forms quite a large portion of the therapeutics recommended by von Niemeyer * in his "Text-book of Medicine," and he speaks in no doubtful manner, as, for example: "In our present state of knowledge, a course of water at Carlsbad is the measure which should deserve the chief reliance as a remedy for diabetes mellitus." In the treatment of renal calculus Sir Henry Thompson † says: "Of all medicinal remedies, perhaps none are so valuable as mineral waters," and Trousseau and Murchison speak in the same emphatic terms in respect to the treatment of other diseases.

Not only have the medical profession of Europe made the therapeutics of mineral waters popular by their indorsement, but the German and French governments have largely supported their springs. In Germany a majority of the springs belong to the Government, which appoints general and local inspectors, whose duty it is to regulate all matters connected with them. The price for the use of the water and baths is fixed by the Minister of Commerce. In some instances the bath physicians hold official positions under the Government. It is usual to arrange the tariff in three classes, in order to bring the price within the reach of the poor and rich alike. Austria supports baths for the use of her invalid soldiers. By means of this governmental support large luxurious bath-houses, furnished with all necessary and sometimes most elaborate apparatus, are kept open for the public. In America the improvement of mineral springs, erection of bath-houses, purchase of apparatus, etc., have been effected entirely by private capital; and the want of money has frequently been the main obstacle in developing our mineral resources.

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* Von Niemeyer, "Text-book of Medicine," vol. ii, p. 781.

† Thompson, "On the Urinary Organs," 1869, p. 202.

At Aix-les-Bains, in Savoy, there are four large swimming baths with douches of various kinds and about fifty rooms, each having two attendants, who administer what is there called the "grande douche." The patient sits on a low wooden stool with his feet in warm mineral water; one attendant, standing behind, deluges the back with the water, which pours out of a large hose, while the second attendant washes and rubs the front of the body. Dr. Grainger Stewart, of Edinburgh, who took a course of baths at Aix-les-Bains, says: "It is astonishing with what skill, patience, tenderness, and firmness the shampooing and passive movements are performed." Dr. Brachet, of Aix-les-Bains, told me that the large increase in the number of bathers—from eleven thousand in 1872 to twenty-four thousand in 1882—was, in his opinion, due as much to the skill of the two hundred employees as to the therapeutic reputation of the waters. These attendants bring their patients in Sedan chairs from their hotels, and, after the bath and massage, they carry them back and put them to bed, rubbing them until the normal temperature is restored. I might speak of the many varieties of douches at Ems, some of which are to be found in our Russian bath-houses—of the inhaling-rooms, filled with finely pulverized mineral waters; of the departments devoted to the spraying of the waters for the relief of nasal and bronchial catarrh; of the carbonic-acid-gas baths; of the various appliances for directing mineralized steam upon a single rheumatic or gouty joint; of the mud and peat baths to be found at Carlsbad, and the amphitheatre at Royat in France, where numerous patients sit about a large opening which looks like the funnel of an ocean steamship, and inhale the mineralized steam which pours out of it. The interesting method of douching at Royat deserves a word. The attendant in charge stands on a raised platform about six feet from the patient. Within easy reach there are a number of faucets which regulate the temperature of the water and the force and size of the stream. With a hose and nozzle the attendant can direct any kind of a stream upon the patient, from fine needles to a large douche, and at any temperature. This is used so skillfully that a patient's temperature can be nicely regulated after he has taken his bath and before he goes home. There are many more styles of treatment, but you are all familiar with them. It is not my purpose to describe any methods of medication, nor to endeavor to ascertain the amount of benefit that patients derive from them. That great benefit is obtained is not to be doubted, and it is equally true that the reputation of the leading European mineral waters is increasing every year. I have been interested in searching for the causes that have contributed to this success, because I believe that if they can be ascertained they can be employed with advantage by us at home. We have the waters, and, if this subject of mineral-water therapeutics is an important one, then what has been said in this paper is not inappropriate for the consideration of this association.

Last year, at New York, your president, Dr. A. L. Loomis, spoke of the necessity of making further investigation and obtaining greater knowledge of mineral-water therapeutics, and more attention is being paid to this subject by the medical profession. At Richfield Springs, I learn that between two and three hundred mineral baths are given daily during the season, that new springs have been developed during the last six months, and that they have sufficient water now to give one thousand baths daily. Two years ago a department for the atomization of sulphur water for the treatment of catarrh of the upper air-passages was also arranged at Richfield, a room where the water was sprayed by steam, and stalls where it was atomized by compressed air. There is a similar department connected with the sulphur baths at Sharon.

Before closing, I wish to express my obligation to Dr. Brachet, of Aix-les-Bains, Dr. Brand, of Royat, Dr. Schnee, of Carlsbad, and Dr. Reuter, of Ems, for courtesies and valuable information extended to me. Allow me to repeat the suggestions offered in this paper, which, if followed, I believe will increase the therapeutical value of our mineral springs:

1. Physicians, individually or in committee, should make careful analyses of our mineral waters.

2. The medicinal value of the waters should be tested by clinical investigation, and the conclusions arrived at given to the profession.

3. If the waters are found to possess marked medicinal merit, physicians should interest themselves in the development of the springs and the improvement of bath-houses and apparatus.

4. Physicians, in sending patients to a mineral spring, should be most careful to select the proper water, and should send with the patient his history and the diagnosis of his disease for the benefit of the physician at the bath.

5. Patients at our mineral spas should be placed under more rigid medical discipline, and more attention should be paid to their habits of living.

6. The social life at our watering-places should be placed on a more wholesome basis.

Correspondence.

LETTER FROM VIENNA.

Professor von Frisch on the Pasteur Treatment of Rabies.—The Anti-rabic Inoculations at Professor Albert's Clinic.—The Cholera in Austria and Hungary.

VIENNA, *September 28, 1886.*

In my last letter I spoke of the communications made by Professor von Frisch and Dr. Ullmann before the Imperial-Royal Society of Physicians as to the results of anti-rabic inoculations. I now wish to acquaint your readers with the results which the first-named investigator has obtained in his various experiments on animals, as the conclusions which he justly draws are of great importance. In a report on the subject, made to the Vienna Academy of Sciences, he says, among other things, that, before he applied his method to man, M. Pasteur had inoculated about twenty dogs with the anti-rabic virus after they had been bitten by rabid animals of the same species, and with success in every instance, as was to be learned from M. Pasteur's own letter. But these experiments, continued Professor von Frisch, were not quite free from objection, as nobody could tell how many of the dogs that had been bitten would have become rabid, and as we could not exclude the possibility that, by some chance, the virus did not infect the animals at the time of the bite. According to M. Pasteur's own statements, the only thoroughly trustworthy way of communicating the virus was by transplanting a portion of the cerebro-spinal substance by trephining; hence the effects of the anti-rabic inoculations should be studied on a series of animals that had been subjected to inoculation by this radical method. Starting with this postulate, Professor von Frisch had made two series of experiments. In the first series, sixteen rabbits were infected by the trephining method with bits of the cervical marrow (rubbed in sterilized *bouillon*) of a mad dog—the same having been inoculated on rabbits to the third remove, and having shown on the last occasion an incubation period of sixteen days. On fifteen of these animals the anti-rabic inoculations were done after the method established by M. Pasteur himself—*i. e.*, they were begun with the feeblest virus (with spinal marrow that had been dried for fifteen days, having been taken from a rabbit inoculated with "*virus fixe*" of a seven-days incubation period). He proceeded daily to a stronger virus until he reached that of a spinal marrow which had been dried for only a single day. The "*virus fixe*," as I stated in my last letter, was derived from two rabbits which had been sent to him by M. Pasteur himself, by whom they had been inoculated. On the first animal the anti-rabic inoculation was done twenty-four hours after the trephining, and on each succeeding animal a day later, in order to ascertain how long before the expected attack of rabies the anti-rabic inoculations would exert their influence. The sixteenth rabbit was not inoculated with the anti-rabic virus, and served only as a test-animal; it fell ill on the eighteenth day, and died of rabies on the twenty-first day after the trephining. Of all the animals inoculated with the anti-rabic virus, only two appeared to be healthy on the day that Professor von Frisch made this communication; they were the second and the twelfth of the series. The rest had been taken sick between the thirteenth and the nineteenth days after the trephining, with the accepted symptoms of rabies, and had succumbed between the fourteenth and the twenty-first days. The thirteenth, fourteenth, and fifteenth animals showed the first symptoms of the disease before they had been inoculated with the anti-rabic virus. The two animals that had not become ill were still within the limits of the incubation period.

In the second series of experiments, in which in general the same succession was observed, he had tried to shorten the series of eleven anti-rabic inoculations (the number laid down by M. Pasteur) by a methodical omission of some of the virulent substances, in order to render the animals earlier fit for the reception of the strongest virus. Of these animals, only one remained healthy at the time of the communication, and in the case of that one the incubation period had not yet expired. In a subsequent communication, made on the 6th of August, Professor von Frisch stated that the two rabbits of the first series that were still alive at the date of his first communication had since died of rabies, on the twenty-eighth and thirty-third days after the trephining, and on the eighth and thirteenth days after the last anti-rabic inoculation. The surviving rabbit of the second series, however, was still in health; but Professor von Frisch was inclined to believe, taking the other results into consideration, that in that case the trephining inoculation had not been successful. In order to be quite sure of the cause of death in these cases, he had inoculated other rabbits with the cervical marrows of those that had died, and all of these test-animals had fallen ill with the well-known manifestations between the ninth and the fourteenth days, and had died between the thirteenth and the eighteenth days after the trephining. He had employed the trephining method on dogs also, and two out of three of them (having been treated with the anti-rabic inoculations) had died of rabies.

"We learn from these experiments," says the investigator, "that, availing ourselves of M. Pasteur's anti-rabic inoculations, we are unable to prevent the outbreak of rabies after infection, either in rabbits or in dogs, if the infecting virus (of at least a fourteen-days incubation period) is conveyed by the sure method of trephining." He added that it was to be regretted on many accounts that M. Pasteur had not availed himself of such experiments in his preliminary investigations before trying his method on man, and that the lack of them was to be considered a capital defect in M. Pasteur's argument. He did not wish to draw further conclusions from his experiments, but he thought the results ought to lead investigators to further experiments on animals.

While Professor von Frisch is making these important statements, based on researches carried on at the Poliklinik, the anti-rabic inoculations of men at Professor Albert's clinic are continued with great perseverance and with good success. According to the latest information I have been able to obtain from that clinic, sixty-six persons have been treated. Three of them had been bitten by mad foxes, one by a mad pig, and the rest by mad dogs. Three quarters of them had been bitten severely. No case of rabies has occurred after the treatment. Out of four persons, one of whom declined the anti-rabic treatment, the latter died, while the others are living. A case occurred recently at the clinic in which the subject, who was a drinker, was attacked with delirium tremens after the first inoculation, and those in attendance entertained the suspicion that the attack might be one of rabies. The patient was transferred to Professor Meynert's wards, where he was treated for alcoholism, the anti-rabic inoculations being carried on at the same time. At the end of ten days he was cured, and returned home.

I have thought in my duty to acquaint you with the *contra* as well as the *pro* in regard to the matter of anti-rabic inoculations in Vienna, and I shall continue my reports in subsequent letters.

As you are aware, the empire has been visited by a formidable guest—the cholera—and the number of cases at Fiume and Trieste has increased of late. From the 26th of August to the 2d of September there were seventy-three cases, with forty-five deaths in Trieste and its vicinity. The hope that the disease might be restricted to the sea-shore has not been realized. We are constantly getting distressing news from Buda-Pest—a city that has only lately been the scene of numerous splendid festivities commemorative of the reacquisition of the Hungarian capital. The information given in the Hungarian newspapers about the cholera is not uniform; while many seek to show that the disease is only cholera nostras, others declare with equal positiveness that it is cholera asiatica. But I think there can be no doubt about its character, as Professor Babes, of the Buda-Pest medical faculty, who has studied bacteriology at Berlin under Koch, and who, two years ago, was the first to observe Koch's cholera bacillus in the Paris cases, has declared the epidemic to be Asiatic cholera. In the "Nemzet," a Hungarian newspaper, he states that, from his researches in Professor Scheuthauer's laboratory, there is no doubt that cholera asiatica is prevailing in Buda-Pest. The *Obersanitätsrath*, of Lower Austria, has already issued a circular of popular instructions as to the measures to be taken against the epidemic, the latter being so near the Austrian frontier.

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ANTI-RABIC INOCULATIONS IN VIENNA.

Professor von Frisch's experiments on rabbits and dogs, an account of which is given in the Vienna letter that we publish in this issue, must be admitted to have some weight in the direction of checking the prevalent tendency to look hopefully on M. Pasteur's system of preventive inoculation for rabies. In our opinion, however, they have not the conclusive character that might at first sight appear, or that has been conceded to them in some quarters. The Viennese investigator entered upon them in the avowed conviction that the anti-rabic inoculations practiced by Pasteur could not be held to be really preventive unless it could be proved experimentally that they were capable of preventing death from rabies inoculated by the extraordinary method of trephining the skull and inserting into the encephalon tissue from the central nervous system of an infected animal. We think he may be wrong in this assumption. It will be seen at once that the radical mode of inoculation in question differs *toto cœlo* from anything that is at all likely to occur fortuitously; no human being need stand in dread that his skull may some time be opened and a bit from a mad dog's spinal marrow buried in his brain. That is one of the vicissitudes of life that we are no more called upon to take into account than the fabled purchaser of a door-plate bearing the name "John Thompson" was warranted in looking forward to the sequence of events that tradition has coupled with the purchase. It is expressly stated by Pasteur, and admitted by von Frisch, that the trephining method of inoculation carries with it the maximum of probability of communicating the disease. Is it necessary to prove that Pasteur's preventive method is adequate against this ingenious refinement of the laboratory before we can feel justified in admitting its efficacy under ordinary circumstances? If we interpret him aright, Professor von Frisch says Yes; we have no hesitation in saying No, and we rest our denial both upon analogy and upon clinical facts. As to analogy, let us take the case of small-pox. It is conceded by everybody but a few who "doubt if doubting be to doubt," that vaccination affords a practically absolute protection against infection with small-pox by effluvium, *i. e.*, in the ordinary way; but it is a well-ascertained fact that many persons whom vaccination has protected against small-pox by the usual modes of conveyance may be inoculated with that disease. The fact that the small-pox so communicated is of a modified form does not militate against the analogy in the least; it only shows that small-pox and rabies are not subject to precisely the same laws—the one we may either prevent or mitigate, the other either is absolutely overcome or defies us utterly. As for the clinical facts, we have only to point to the experience at Professor Albert's clinic in Vienna, also mentioned by our correspondent, and couple them with Pasteur's own splendid achievements. Von Frisch's objection is not of the carping sort of which so much has been heard, but it is nevertheless inconclusive.

THE AMERICAN MEDICAL ASSOCIATION.

We are glad to see by an editorial article in the last number of the "Journal of the American Medical Association," presumably expressing Dr. Davis's views, that an effort is likely to be made to remedy some of the defects in the present way of conducting the meetings. The prominent feature touched upon by the writer relates to the addresses before the general sessions, which, it seems to us, are properly said to be too many in number and therefore to occupy too much time. As things are arranged now, not only the president of the association, but the chairman of each of the eight sections, is expected to deliver an address to the general assembly. Nine addresses are, accordingly, crowded into three days' proceedings, for, although the meeting continues for four days, the last day can scarcely be said to count. The president's address usually embodies recommendations that call for action, and any action taken on them ought to be the outcome of careful consideration. It is unnecessary to say that an over-pressure of items on the programme, many of which consist in listening to other addresses, is not conducive to the full and free discussion necessary to such a careful consideration. The evil is not likely to diminish under the present arrangement, but rather to increase, for the tendency is to establish additional sections from time to time. Besides the practical disadvantage of the system now in force, a certain influence is necessarily at work upon the chairmen of some of the sections tending to change addresses which, if their authors followed their unbiased bent, would in many instances be notable contributions to the literature of their respective departments of medicine, if not in all cases, into futile attempts to clothe special topics with a garb attractive to those who in the nature of things can take only a lukewarm interest in them. The result is that the sections are often deprived of their chairmen's best work, and the general meeting is hampered in its business. The remedy proposed in the article to which we have referred is to have the addresses by the chairmen of sections given in the meetings of the respective sections. Those meetings would, of course, still be open to everybody in attendance on the meeting at large, and they could easily be so arranged in regard to time as never to leave the general session destitute of an attendance large enough to give adequate consideration to any measure before it. The change suggested by the association's "Journal" seems to us in every way desirable, and we should be glad to see it carried out.

A PROPOSED BUSINESS COMMITTEE FOR THE AMERICAN MEDICAL ASSOCIATION.

At a recent meeting of the Chicago Medical Society, an account of the proceedings of which appears in the "Journal of the American Medical Association," Dr. N. S. Davis gave his impressions of the British Medical Association, founded, it is to be inferred, largely on what he observed at the Brighton meeting and in his intercourse with our professional brethren in the United Kingdom during the past summer. Dr. Davis is of the opinion that such an organization as the British Council would not be at all suited to the wants of the profession in the United States. It seems that the suggestion had been made that some such body should be constituted. Instead, Dr. Davis proposes a business committee consisting of two members from each State society represented in the American Medical Association, each of the two to hold office for two years, but one to retire each year. The committee should do all the work that now devolves on the nominating committee, which, as Dr. Davis justly says, "is appointed in a hurry by little knots gathered together who want to get through." The chief objection mentioned as being brought against the British Council is that it is difficult to get the representatives of remote districts to attend the meetings, which are held in London, the result of which is that the affairs coming within its jurisdiction are practically managed by members of the profession living within a hundred miles of London. Our country being so much greater in territorial extent, this objection would have still more force in our case. We understand from the report of Dr. Davis's remarks that his idea is that such a committee as he proposes would not need to be specially called together, but would transact its business in conjunction with the annual meeting of the association, which the greater number of its members would be reasonably certain to attend. Dr. Davis's long and intimate acquaintance with the affairs of the association makes any suggestion of his concerning its management worthy of the most thoughtful consideration, and it is undeniable that what he says about the loose way in which the work of the nominating committee is now provided for points to one of the first defects to be remedied.

MINOR PARAGRAPHS.

THE INTERNATIONAL MEDICAL CONGRESS.

In the remarks made by Dr. N. S. Davis at a recent meeting of the Chicago Medical Society, to which we have alluded in another article, he gave an account of the cordial reception with which he and his fellow-representatives of the organization of the congress had met in Great Britain, and of the assurances they had received that the European profession would be well represented at Washington. He closed with this statement: "In France they do not pay the slightest attention to any differences we have, and, just as far as they imagine there is coldness in England or Germany, the Frenchman comes with the more enthusiasm to make it up."

THE IMPORTATION OF RAGS INTO BOSTON.

The Boston Board of Health lately ordered that, on and after October 1st, any vessel arriving at that port having on board any rags, paper stock, or other cargo or personal baggage coming from a port or place epidemically affected with any contagious or infectious disease within six months before should be anchored at Quarantine; that all old rags should be regarded with suspicion and detained by the Port Physician unless the United States Consular Officer at the port of departure had certified that they had not been gathered or baled at or shipped from any place infected in like manner; and that cargoes and personal baggage thought by the Port Physician or the Board of Health to be infected should be removed to the storehouse on Gallup's Island, there to be disinfected in case they could not be properly disinfected on board the vessel. This seems to be a rational way of dealing with the vexed question of the disinfection of rags.

THE GEORGETOWN MEDICAL COLLEGE.

The introductory lecture to the thirty-eighth annual session was given last week by the professor of surgery, Dr. John B. Hamilton. It consisted in great part of a sketch of the history of medicine. Condensed as it was, it was strikingly graphic. The speaker adopted Sprengel's scheme of the correlation of the chief epochs of medicine with memorable events in general history. Interspersed with the statements of facts were many just and wholesome deductions. One of the generalizations was that the Arabians had contributed little if anything to the progress of the medical art, their chief merit having been that of preserving Greek and Alexandrian medicine.

THE YALE MEDICAL SCHOOL.

It is gratifying to learn that the president of Yale College was present at the recent opening of the session at the Medical School, and that, in the course of a short address, he expressed the feeling that the real connection of the school with the university should be made as close as possible. "We at Yale," he said, "are passing out of the period when we had a college with certain outlying branches; we are now having a university with its several departments."

THE ALLEGED ILL-TREATMENT OF DEAD BODIES AT WARD'S ISLAND.

A committee of the Board of Emigration is engaged in examining into certain charges to the effect that in numerous instances the bodies of those who have died at the State Immigrant Hospital on Ward's Island have been wantonly mutilated. Thus far nothing very serious seems to have been proved, and the testimony appears to come with considerable profusion from a person employed in the dead-house.

ITEMS, ETC.

Infectious Diseases in New York.—We are indebted to the Sanitary Bureau of the Fourth Division of the Health Department for the following statement of cases and deaths reported during the two weeks ending October 12, 1886:

DISEASES.	Week ending Oct. 5.		Week ending Oct. 12.	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever	35	12	60	12
Scarlet fever	17	2	17	5
Cerebro-spinal meningitis	5	4	1	1
Measles	38	3	69	6
Diphtheria	56	31	57	33

The Medical Society of the County of New York.—At the special meeting to be held next Monday evening, Dr. Julius Althaus, of London, will read a paper on "Tetany and Tetanilla." It is expected that Dr. William A. Hammond, Dr. A. Jacobi, and Dr. E. C. Seguin will take part in the discussion.

The Medical Society of the County of Kings.—At the meeting to be held next Tuesday evening, Dr. Walter Lindley, editor of the "Southern California Practitioner," will read a paper entitled "Southern California: a Climatic Sketch."

The New York County Medical Association.—At the meeting to be held next Monday evening Dr. Frederic S. Dennis will read a paper entitled "Some Points of Special Interest in the Treatment of Compound Fractures, including a Report of over Five Hundred Consecutive Cases."

Small-pox in Brooklyn.—A death from a malignant type of the disease is reported as having occurred, on Sunday last, in a thickly settled portion of the city.

The American Academy of Medicine.—At the recent annual meeting the following officers were elected for the ensuing year: Dr. L. P. Bush, of Wilmington, Del., president; Dr. R. L. Sibbett, of Carlisle, Pa., Dr. S. J. Jones, of Chicago, Dr. P. T. Connor, of Cincinnati, and Dr. V. P. Gibney, of New York, vice-presidents; Dr. R. J. Dunglison, of Philadelphia, secretary and treasurer. The next annual meeting will be held at Washington on the Friday and Saturday preceding the meeting of the International Medical Congress, which is to convene September 5, 1887.

The Woman's Medical College of Pennsylvania.—The winter session was opened on Thursday, the 7th instant. The address was to have been delivered by Dr. W. W. Keen, professor of surgery, but, as sickness prevented his attendance, the class was welcomed by the dean. Dr. Keen has recovered sufficiently to attend to his duties.

Professor Winkel.—Last evening a dinner was given at the Union Club by Dr. Fordyce Barker in honor of Professor Winkel. This was followed by a reception at Dr. Barker's house.

An Association Hospital, the *Logen- und Vereins-Hospital*, was opened in St. Mark's Place last Sunday. The association represents the Masons, the Odd Fellows, and several such orders. The special object of the institution is to serve as a retreat for the sick members of the contributing organizations, under the care, it is stated, of physicians of their own choosing.

The Health of Chicago.—According to the Health Department's "Condensed Statement of Mortality," the whole number of deaths in September was 1,145, including 1 from carbuncle, 106 from cholera infantum, 3 from cholera morbus, 92 from croup and diphtheria, 24 from diarrhœa and dysentery, 31 from entero-colitis, 2 from erysipelas, 8 from cerebro-spinal fever, 2 from remittent fever, 6 from scarlet fever, 54 from typhoid fever, 10 from typho-malarial fever, 10 from measles, 7 from pyæmia and septicæmia, 1 from thrush, and 18 from whooping-cough.

A Southern Sanitarium.—We learn that the sanitarium established in Daytona, Florida, by Dr. John Ball, of Brooklyn, will be opened in November. The institution is situated on the Halifax River.

Society Meetings for the Coming Week:

Monday, *October 18th:* New York Academy of Medicine (Section in Ophthalmology and Otology); New York County Medical Association; Hartford, Conn., City Medical Association; Chicago Medical Society; Medical Society of the County of New York (special).

Tuesday, *October 19th:* New York Academy of Medicine (Section in Theory and Practice of Medicine); New York Obstetrical Society (private); Roman Medical Society (private); Medical Societies of the Counties of Kings and Westchester (White Plains), N. Y.; Ogdensburg, N. Y., Medical Association; Medical Society of Hunterdon County (Flemington), N. J.

Wednesday, *October 20th:* Harlem Medical Association of the City of New York; Northwestern Medical and Surgical Society of New York (private); New Jersey Academy of Medicine (Newark); Philadelphia County Medical Society (clinico-pathological).

Thursday, *October 21st:* New York Academy of Medicine; New Bedford, Mass., Society for Medical Improvement (private).

Friday, *October 22d:* Yorkville Medical Association (private); New York Society of German Physicians; New York Clinical Society (private); Philadelphia Clinical Society; Philadelphia Laryngological Society.

Saturday, *October 23d:* New York Medical and Surgical Society (private).

OBITUARY NOTES.

William H. Dudley, M. D., of Brooklyn.—Dr. Dudley, who was a native of Ireland, died last Saturday at the age of seventy-five. He obtained the diploma of the Royal College of Surgeons of Ireland in 1833 and that of the New York College of Physicians and Surgeons in 1842, having shortly before come to this country from Jamaica, where he had been in practice for several years. He made Brooklyn his home, and there he not only achieved honorable distinction as a practitioner, but earned the gratitude of the profession of that city by the leading part he took in the organization of the Long Island College Hospital. He was one of the consulting physicians to the hospital at the time of his death, and a member of the Medical Society of the County of Kings, of the New York Academy of Medicine, and of the Physicians' Mutual Aid Association.

James Anderson, M. D.—The death of this venerable practitioner, a "gentleman of the old school," took place on Thursday of last week. Although he was in his eighty-ninth year, until very recently he had attended to his practice, and there had been no indication in his appearance of a decay of his physical powers. The deceased was a graduate of the College of Physicians and Surgeons, of the class of 1820. He was a member of the Academy of Medicine, of which he was for several years the president at a period in its history when it stood in need of the services of just such an energetic and determined man. He was also a member of the Society for the Relief of the Widows and Orphans of Medical Men and of the Physicians' Mutual Aid Association.

Professor Don Rafael Lucio.—The "Gaceta Médica de Méjico," the official organ of the Mexican Academy of Medicine, devotes the whole of its issue for September 15th to the addresses made at a meeting held in memory of Professor Lucio, who recently died at an advanced age. The journal in question publishes a lithographic portrait of the deceased.

Letters to the Editor.

THE SOCIAL EVIL.

177 Bleecker Street, New York, *October 11, 1886.*

To the Editor of the New York Medical Journal:

Sir: The following rules and regulations, issued and enforced during my term of service as medical director of Tokio City Government Hospital, Tokio, Japan (1873 to 1875), in view of Dr. Ferdinand C. Valentine's admirable letter on prostitution and its problem, in a recent number of your Journal, may prove of interest:

A district distinct but central was set apart for prostitutes and their uses, and was known as the prostitutes' quarter. Women registering for prostitutes were examined and licensed if found to be non-infectious. When so licensed, they were compelled to wear a distinguishing badge, the univeral woman's "obi," a broad silk belt with its huge knot tied in a peculiar manner. They were compelled to live in the quarter set apart for them.

Compulsory vaginal examinations were made weekly by our medical staff. Those found diseased were at once brought to the hospital, and not relicensed until certified as cured.

Our venereal wards were conducted on a strict English "Lock" system.

Taxes were levied on all licensed prostitutes, householders, tea-house women, and restaurant keepers in this district.

Each paid a monthly tax as follows:

The first, $2; the second, $5; the third and fourth, $3.

There were about two thousand licensed prostitutes in the city of Yedo at that time. The tax maintained and built up new wards, and yielded a handsome revenue to the city besides.

Very respectfully,

Albert S. Ashmead.

Proceedings of Societies.

NEW YORK ACADEMY OF MEDICINE.

Meeting of October 7, 1886.

The President, Dr. A. Jacobi, in the Chair.

Some Phases of Cerebral Syphilis.—Dr. Julius Althaus, of London, a corresponding member of the Academy, read a paper in which, after a few introductory remarks, he said:

The fact that the structure and functions of the brain may be peculiarly and specifically affected by the syphilitic virus seems to have escaped the acumen of the old masters in our profession. When syphilis first appeared in Europe, toward the end of the fifteenth century, and for a very long period afterward, the terrible external manifestations of this appalling disease engrossed the attention of medical practitioners to an unusual degree; nor were these symptoms of the malady of France unknown to the laity. Thus, Shakespeare's Timon says to the two courtesans, Phrynia and Timandra:

"Give them diseases! bring down rose-cheek'd youth
To the tub-fast, and the diet . . . Consumption now
In hollow bones of man; strike their sharp shins,
And mar men's sparring. Crack the lawyer's voice,
That he may never more false title plead,
Nor sound his quillets shrilly: hoar the flamen,
That scolds against the quality of flesh,
And not believes himself: down with the nose,
Down with it flat; take the bridge quite away
Of him, that his particular to foresee,
Smells from the general weal: make cur'd-pate ruffians bald
And let the unscarr'd braggarts of the war
Derive some pain from you; plague all,
That your activity may defeat and quell
The source of all erection."

And the clown in Hamlet, in the grave-digging scene, says, in answer to the question how long a man will lie in the earth ere he rot, that he will last for eight or nine years

"If he be not rotten before he die,
As we have many pocky corses nowadays
That will scarce hold the laying-in."

While, therefore, impotence and disease of the cranial bones were thus early stated to be results of syphilis, yet nothing was known for a long time about any specific disease of the viscera, and more especially of the brain and spinal cord, as arising from venereal infection. When, however, it eventually became obvious that some nervous complaints, such as paralysis, epilepsy, and insanity, frequently occurred in those who had previously suffered from the more ordinary forms of constitutional syphilis, this was explained by that convenient figment, a metastasis having taken place from the skin and mucous membranes to the brain, whereby the latter suffered without being actually diseased.

This fantastic view of the matter, however, did not commend itself to the clear intellect of such men as Hunter and Astley Cooper, who, on the contrary, stated plainly that the brain as well as the other internal organs was insusceptible to the venereal poison. This latter doctrine held the field for a very considerable time, as may be seen from a perusal of the works on diseases of the nervous system which appeared in the first half of the present century. Thus, I find that Abercrombie, in his work on the diseases of the brain and spinal cord, which was for many years the great authority on nervous affections, and the first edition of which appeared in 1828, never once mentions the word syphilis at all. In speaking of the causes of brain disease, the Edinburgh professor alludes to continued fever and the exanthemata; injuries to the head; suppressed evacuation of certain secretions, such as the catamenia and the urine; scrofula; passions of the mind, stimulating liquors, and exposure to the intense heat of the sun. *Voila tout.*

The same remark applies to the works of Sir Charles Bell, Marshall Hall, and Romberg. In the latter's clinique at Berlin, which I frequented assiduously in 1853 and 1854, and where I had the opportunity of seeing a large number of cases of all kinds of nervous diseases, I remember only a single instance where that great master allowed syphilis to have been the cause of the patient's illness; and that was a case of paralysis of the third nerve, which was stated to be due to syphilitic periostitis at the base of the skull. In 1854 and 1855 I likewise attended the syphilitic cliniques of von Bärensprung, at Berlin, and of Sigmund, at Vienna, and saw numerous cases of primary and secondary affections, but not one of cerebral or spinal syphilis. Nor did the great leaders of the Vienna school of medicine, such as Skoda and Oppolzer, whose teaching I followed in the winter of 1855–'56, draw attention to this subject in their otherwise admirable clinical lectures. Canstatt's text-book on special pathology and therapeutics, which was at that time in the hands of almost every student of medicine in Germany, and also constituted the principal guide of the practitioner, was likewise absolutely silent on this subject in the chapter on nervous diseases; while in that on syphilis the practitioner was actually cautioned not to believe in such a thing as syphilis of the brain—a most astounding statement when we consider that perhaps 80 per cent. of all cases of brain disease which occur in patients between twenty-five and forty years of age are actually owing to that distemper. The same ideas prevailed in France, where Trousseau and other masters whose wards I frequented in the summer of 1855 never mentioned cerebral syphilis at all, and invariably attributed any nervous symptoms in syphilitic patients to cranial periostitis.

The only man who about that time knew that the brain was liable to specific disease was Professor Waller, of Prague, whose lectures I attended in the summer of 1856. He told his hearers then that he had seen red and white softening and a deposit of solid effusions in the white as well as the gray matter of the brain. According to him, the symptoms during life were indistinct, and we could only diagnosticate cerebral syphilis where the patient suffered at the same time from external manifestations of the distemper. He had known patients in the later stages of the disease to suffer from epilepsy, paralysis, and mental hebetude; but the brain might also suffer at an early period, synchronously with the ulcerated throat, and he had seen cases in which a most violent form of headache was the principal symptom, and where in spite of active treatment the patients had died comatose. I believe that these observations of Waller's have never been published, and what I have just mentioned is culled from notes which I took at the time his lectures were delivered.

With this solitary exception, then, all that was taught until a comparatively recent time on this subject was, that syphilis might produce an affection of the dura mater analogous to that of any external periosteum; that the membrane might become inflamed, and an intra-cranial node be formed, which would irritate the surface of the brain, and might give rise to neuralgic, convulsive, and paralytic symptoms. Cases of this kind have been described among others by Sir Philip Crampton, Graves, and MacDowell, of Dublin; by Reade, of Belfast; and by Todd, of London.

A new era in the history of our subject began with the great impetus which was about that time given to the study of pathological anatomy. Among the many successful workers in this most attractive field of research two men stand forth conspicuously as far as our subject is concerned—viz., Virchow, whose investigations cleared up the nature of syphiloma of the brain and its membranes (1869), and Heubner, who gave us a clear insight into the syphilitic alterations which are apt to occur in the cerebral arteries (1874). These researches may, each in its own way, be considered as land-marks in the history of cerebral syphilis. The foundations of the doctrine were now securely laid, so as to be beyond cavil; and it became clear that, although subsequent work might amplify our knowledge in this respect, it could no longer reverse what was once firmly established.

The salient feature of this work is, that the peculiar and specific alteration which occurs in the brain as a consequence of constitutional syphilis is not inflammation, but bears throughout the character of a neoplasm. A foreign tissue is apt to be deposited in the dura mater, the subarachnoid space, or the cerebral substance, and form the several kinds of tumor known as syphiloma or gumma. Apart from this, however, there occurs a special disease of the cerebral arteries, which likewise appears in the form of a neoplasm, inasmuch as a deposit takes place between the endothelium and the elastic fibers of the vessel, whereby its diameter is at first reduced, and the lumen eventually completely blocked up by thrombosis, causing ischæmia, starvation, and softening of the area of cerebral tissue which is supplied by the suffering vessel. Syphiloma and arterial thrombosis cover indeed the immense majority of cases of cerebral syphilis which are met with in practice. There remains a residuum of cases in literature in which no structural change could be discovered after death, and in which the symptoms were generally attributed to congestion; it is, however, a suggestive fact that within the last ten or fifteen years, during which the finer methods of microscopic research have been so much improved, the record of such cases has almost ceased; and it therefore appears probable that one or the other of the two fundamental lesions which I have just mentioned, and their consequences, may in the future be generally found to exist in fatal cases of this description; while, in many of those which do not prove fatal, I believe anæmia rather to be the cause of the symptom than congestion, to which it is usually attributed.

While, therefore, Virchow's and Heubner's work must be looked upon as epoch-making in the pathology of cerebral syphilis, correspondingly good clinical work has been done elsewhere. I shall probably not be contradicted when I say that Fournier's book, "La syphilis du cerveau," which appeared in Paris in 1879, has very greatly extended our acquaintance with the more common as well as the more unusual forms which brain-syphilis is apt to assume at the bedside. Fournier has distinguished six different forms of it—viz.: the cephalalgic, the congestive, the convulsive or epileptoid, the aphasic, the mental, and the paralytic; and his description of the symptoms which occur in these several forms is more minute and exhaustive than any which had been given before, and will on that account always remain a monument of able and painstaking industry. A disappointing feature of Fournier's work is that he does not generally point out clearly the connection which exists between clinical signs and pathological lesions, and appears to be only slightly acquainted with the modern doctrine of cerebral localization, which just in this department of clinical medicine finds its most interesting and striking practical applications.

I now proceed to the more particular object of my paper, which is to draw your attention to some manifestations of cerebral syphilis with the peculiarities of which we are as yet imperfectly acquainted. Time, that most unsparing of tyrants, will only allow me on this occasion to revert to two among the numerous subjects which crowd on one's attention in thinking of brain-syphilis; and those which I have selected are syphilitic coma and syphilitic hemiplegia.

That *coma*, coming on more or less suddenly in an apparently healthy man, or in one who shows at the time unmistakable symptoms of venereal disease, may be a manifestation of this latter distemper, is not generally known in the profession. We are all familiar with uræmic, alcoholic, and diabetic coma; with the coma of cerebral hæmorrhage and that of opium poisoning; with that which occurs after the epileptic fit, with or after severe hysterical and hystero-epileptic convulsions; after prolonged exposure to extremes of temperature, whether heat or cold; after erysipelas of the face and head; from compression of the brain by a depressed fracture of the skull, by extravasated blood, meningitis, and the presence of pus and other products of inflammation. Nor must we forget that several chronic affections of the nervous system, more especially tabes spinalis and general paralysis of the insane, are apt, toward their termination, to be attended by attacks of coma. Most of these conditions are described in the text-books, while syphilitic coma is not even mentioned. Fournier is almost the only author who has pointedly, although briefly, alluded to this condition, and related an example of it which occurred in his practice. A knowledge of syphilitic coma is, however, of great practical importance, inasmuch as it requires an entirely different treatment from that of other forms of coma; and an incorrect diagnosis is in such a case likely to seal the fate of the patient.

I have seen altogether eight unmistakable cases of syphilitic coma. They all occurred in men between twenty-five and forty-two years of age. In every one of them there was a definite history of primary and secondary syphilis; in four there was at the time a specific rash on the scalp and other portions of the skin; and in one there was an ulcer on the tongue. In one case the coma appeared eight months after infection, in six cases between three and five years, and in one case seventeen years afterward. In two cases no other cerebral symptoms had occurred before the coma, while six other patients had at various times suffered from giddiness, epileptoid convulsions, and transient loss of power in the limbs.

Among the exciting causes of the attack, I have noticed overwork, anxiety, trouble, and sexual and alcoholic excesses. In two cases no exciting cause whatever could be ascertained. Six of the patients were professional men, and two were men without any regular occupation.

The symptoms of syphilitic coma I venture to classify as: 1. Premonitory signs. 2. Symptoms of the initial stage. 3. Symptoms of the final stage of coma. I have noted the following premonitory symptoms of the attack of coma: headache, with a feeling of confusion and drowsiness; indistinct utterance; a perception of black specks floating before the eyes, with sudden loss of sight for a short time; numbness in the limbs and some loss of muscular power. In six cases such symptoms occurred either a few hours or a day or two before the attack, while in two other cases they appeared to have been entirely absent.

The initial stage of syphilitic coma appears to set in habitually during sleep, the patient being discovered by his friends or servants in the morning in a state of apparent insensibility from which he can not be roused. He is lying quietly on his back, apparently quite unconscious, and, as it were, in a profound sleep. He is evidently not suffering any pain; he does not moan, throw himself about, or put his hands to his head. The face is absolutely devoid of expression; there is a complete blank, with no distortion of the features. The complexion is generally pale. Sometimes he can be roused by shouting to him; he may speak a word or two, and appears to recognize the voice of a friend better than that of a stranger. When asked whether he can see you, he may answer that he is blind. When requested to put out his tongue, he is seen to make an effort to do so. Sometimes the only response is a movement of the lips; at other times the tip of the tongue is protruded, which is then seen to be dry and covered with a whitish fur through which some few red papillæ are seen to project, but it does not deviate to the side. When food is put into his mouth, the patient makes an effort at deglutition, and generally succeeds in swallowing small quantities of fluid. The eyes are closed. On opening the lids, the eyeballs are seen to be deeply retracted into the orbit, one sometimes more so than the other; and they are seen to diverge somewhat in their direction, which imparts to them a peculiarly dazed and stupid expression. The deeper the coma, the greater, *cæteris paribus*, is the degree of divergence. The pupils are small and insensible to light. On account of the position of the eyes, an ophthalmoscopic examination is generally not practicable, but it reveals nothing unusual when practiced. The reflex excitability of the conjunctivæ is either very much blunted or entirely gone. The breath is sometimes offensive.

The muscles of the limbs and the body are in a state of perfect relaxation. The body will retain any position which is given it. On lifting the arms or legs, no resistance is encountered; and on dropping them, they flop back heavily by their own weight, like inanimate matter, as in a dead body from which *rigor mortis* has disappeared. There is no difference at all between the two sides of the body; no appearance of hemiplegia, or rigidity, or tremor, but a dead level of paralysis, with complete loss of muscular tone everywhere.

Sensibility and reflex excitability are greatly diminished or quite gone. I have already mentioned that the conjunctival reflex is lessened or absent, and that there is no light reflex in the pupils. Tickling the soles or the knees produces no withdrawal of the legs; but, on smartly pricking the skin with a pin, there is generally a slight response. Where the coma is not very deep the patient may express by a grunt his dislike of the proceeding. The deep reflexes or tendon phenomena either are absent or can only be elicited with considerable difficulty, and then appear slight and sluggish.

There is, either from the first or very soon, incontinence of the excretions, especially of the urine, which is apparently secreted much in the usual manner, and dribbles away as it reaches the bladder, on account of paralysis of the sphincter. The fæces are also apt to come away involuntarily, but occasionally there is obstinate constipation, which only yields to powerful purgatives or enemata, and the evacuation then takes place into the bed, the patient having no sensation of its coming away and being unable to give a warning.

The pulse is habitually slow, beating at the rate of 40, 50, or 60 in the minute. In one case I have known it to go down to 36, while in another it was 86. The quality of the pulse varies in the different cases; it may be hard and wiry, showing the sphygmographic signs of increased tension, or tolerably full, or small and feeble, when the sphygmograph indicates low tension. Respiration is slow and shallow, the excursion of the chest-walls and diaphragm being insignificant. The rate of the inspirations varies like that of the pulse, but is generally less than in health. The average rate appears to be from eight to ten. The temperature is below the average, and ranges habitually between 96° and 97° F. In one case I have known it to go down to 95°.

In two cases there was an eruption of herpes in the face, large groups of vesicles being formed on inflamed patches on both cheeks. On the first day the liquid was clear; on the second it became opaque, and the epidermis then gradually peeled off in small patches. Otherwise the skin is generally dry, there being little or no perceptible perspiration.

What is the condition of the brain in the cases which I have just described? It is evidently a complex one, for, while we have, on the one hand, symptoms of paralysis, there are, on the other hand, signs of irritation of the nervous centers. The loss of consciousness and of voluntary motion and sensation shows that the function of the cineritious substance of the hemispheres, and notably that of the frontal and temporal lobes and of the central convolutions, is in abeyance, while the state of the pulse, the respiration, and the temperature shows that the cardiac, vaso-motor, respiratory, and thermic centers in the medulla oblongata and the pons Varolii are in a state of irritation. Such a coincidence of paralysis and irritation is by no means so singular as it might appear at first sight, if we consider the various degrees of excitability which exist normally in different portions of such a highly complex organ as the brain is known to be. Of all parts of the encephalon, the gray cortex is the most highly vitalized, and the one that requires the most active circulation of the blood, the most incessant supply of oxygen, in order to be able to properly discharge its function. Any interference with the supply of arterial blood to the cortex, however temporary, acts like a blow with a hammer on a magnet—that is to say, it destroys its function for the time being by suddenly disturbing its molecular condition. In poisoning by carbonic acid there is at first a short stage of irritation of the cortex, shown by headache, giddiness, and noises in the head, but this is rapidly succeeded by depression, consciousness being lost and a state of coma induced. At this time, however, there is still irritation of the medulla, shown by a slow pulse, increased blood-pressure, and convulsions; and this stage is only eventually succeeded by paralysis, when respiration becomes feeble, the blood-pressure falls, and death results from apnœa. That in patients suffering from syphilitic coma there may be a short stage of cortical irritation is rendered probable by the premonitory symptoms which I have mentioned, such as headache, giddiness, and a feeling of confusion.

A coincidence of depression and irritation may be observed in much less complex structures than the brain. Thus we have in the early stage of an acute attack of sciatica, whether of rheumatic or traumatic origin, on the one hand symptoms of depression—viz., numbness in the foot and loss of power in the muscles supplied by the sciatic nerve; and, on the other hand, concurrently with them symptoms of irritation—viz., acute pain in the whole or part of the limb, and convulsive twitches in the muscles which are under the influence of the suffering nerve. That there is irritation of the lower centers in the first stage of syphilitic coma seems to me to be proved by the slow pulse, the increase of blood-pressure which is present in the majority of cases, the retarded respiration, the lowered temperature, and finally the state of the pupil and of the ocular muscles. There is a center for these latter parts in the posterior portion of the floor of the third ventricle and the aqueduct of Sylvius, and therefore in intimate connection with the upper portion of the pons Varolii, which has been shown by Hensen and Voelcker to have definite relations to the iris and the other muscles of the eye. Irritation of this center would explain the contraction of the pupil and the different forms of ocular spasm which are found to be present in syphilitic coma, just as paralysis of the same center is known to lead to the different forms of ophthalmoplegia.

The initial stage of syphilitic coma lasts in general from two to five days, and either is followed by recovery or merges into the final stage which leads to death. In the former case the patient gradually begins to show signs of returning consciousness; he opens his eyes from time to time, moves them about in different directions, and recognizes the people about him. He regains his command over the sphincters, and calls the nurse when desiring to pass his excretions. The power of swallowing is improved; he begins to take food with some amount of relish, recovers his muscular power, sits up in bed, has natural refreshing sleep followed by wakefulness, and presently wants to get up, and begins to go about again. In ten days or a fortnight he may apparently be well and able to resume, at least to some extent, his previous occupations. In other cases recovery is slower and more imperfect. The speech remains indistinct and halting; the memory is weak. An hour after having seen a person or read a newspaper, the patient remembers nothing about it. The power of moving the eyes freely remains impaired. He does not seem to take much interest in his affairs, or show much affection for his family. At times, however, he appears to realize his position acutely, and bursts out crying, while at other times he is absent-minded and drowsy.

> "All is but toys; renown and grace is dead;
> The wine of life is drawn, and the mere lees
> Is left this vault to brag of."

Eventually, however, even in these less favorable cases, the brain-power may be more or less restored, showing but little deterioration compared with what it was previous to the attack.

This is the bright side of the picture; and, as recovery generally takes place in consequence of an energetic specific treatment, the doctor may well take credit to himself for having saved his patient's life or reason. But there is also a darker side, since in some cases all the resources of our art prove unavailing. The patient, then, after having been for a few days in the condition previously described, gradually sinks into what I propose to call the *final stage* of syphilitic coma. This stage is characterized by an intensification of the symptoms of unconsciousness and loss of voluntary power, sensation, and reflex excitability; while the signs which I have referred to—irritation of the pons and bulb—now pass into such as denote a paralytic state of these organs. The face is livid and cyanosed; the conjunctivæ are injected, covered with shreds of mucus, and insensible to touch or irritation. The mouth is wide open, from paralysis of the masseter muscles, causing the lower jaw to drop. The breath is fœtid, the power of swallowing lost. There is either excessive secretion of buccal mucus or great dryness of the lips, tongue, and cavity of the mouth, which are often covered with sordes. The surface of the body is bathed in clammy sweat. The pulse, where it has been hard and wiry, rapidly loses that character, and becomes small, feeble, and very quick, going up to 140, 180, and more. It eventually can not be counted, and shows sphygmographically the characters of collapse, there being only a very slight elevation followed by a proportionate depression, but without waves, aortic notch, or dicrotism. The respiration, from having been retarded, is now accelerated, with thirty to forty and more inspirations a minute. It may become stertorous and pass into the Cheyne-Stokes type; or neurolytic catarrh of the air-passages sets in, with excessive secretion of bronchial, tracheal, and laryngeal mucus, while, on auscultation, râles are heard all over the chest. This may pass into hypostatic pneumonia, when the mucus becomes tinged with blood. At the same time, the temperature is found to rise from 95° and 96° to 104°, 106°, and 108°. The pupils become enlarged and show their maximal dilatation at the moment of death. Eventually the face assumes the Hippocratic expression, and is occasionally so altered within a few minutes that the patient's friends have difficulty in recognizing him. This stage generally lasts from twenty-four to thirty-six hours, and terminates in dissolution; the patient passes away to

> "That undiscovered country from whose bourne
> No traveler hath returned."

Of the eight cases of syphilitic coma which have fallen under my observation, six ended in recovery and two in death in the first attack. In three of those who recovered from the first attack, however, relapses took place after some time, and one of these latter patients eventually died, after having survived five such attacks in three years. I regret to say that I was not allowed to make a necropsy in either of the two fatal cases, and I am, therefore, unable to describe to you the exact lesion which caused the illness and the final result. Reasoning from analogy, however, it seems to me highly probable that we have in these cases to do with an affection of an important cerebral artery, which becomes gradually occluded by specific deposit in the way so clearly described by Heubner, and that the vessel principally implicated is the basilar artery. The basilar artery gives branches to the cerebellum, pons, and medulla oblongata, and terminates in the arteria cerebri profunda, thus supplying the (vitally) most essential parts of the brain; and it is obvious that an interruption of the blood-supply by this vessel must lead to a profound alteration of the parts nourished by it. Sudden occlusion of this artery by acute inflammation or deposit leads rapidly to a fatal result, the principal symptom being profound coma from the beginning of the illness.

Hayem has recorded the case of a woman, aged thirty-three, who was brought into the hospital in a comatose state, in which she had been found at home shortly after having been seen engaged in her usual occupations. This patient died in twenty-one hours. The autopsy showed acute inflammation of the basilar artery, all the coats of the vessel, but more especially the internal one, being much thickened, and in one place so much so that the lumen of the vessel was entirely occluded. There were hyperæmia, swelling, effusion, and abundant production of young cells and nuclei. Where the vessel was not occluded by inflammation, it was filled up with a thrombus, part of which was soft and pinkish, while another part was hard and resisting, the clot being apparently due to rupture of the internal coat of the artery through the effusion, after which the blood had become coagulated and mixed with the broken-up structures. The brain-matter was firm, with the exception of the pons, which had a pasty consistence, more especially in its lower portion, which is in direct connection with the basilar artery;

but there was no actual softening. Indeed, there had been no time for the production of such a change. Similar cases have been seen by Vulpian, Martineau, Gouguenheim, and Bastian. The case of the latter observer was that of a watchman, aged forty-three, who had been apparently in his usual health and was suddenly taken with coma, which proved fatal in less than six hours. After death there was found an aneurysmal dilatation of the posterior half of the basilar artery, which was perfectly occluded by a soft, colorless clot, uniformly adherent to the aneurysmal walls. The middle cerebellar arteries were in connection with the aneurysmal swelling, and likewise occluded. Otherwise nothing of importance was discovered in any one of these cases, and the symptoms which were present are indeed well explained by the sudden anæmia induced in the vaso-motor, cardiac, and respiratory centers in the pons and bulb by the basilar artery becoming impervious.

The only difference between the cases of acute inflammation and of sudden coagulation on the one hand, and those which I have described as cases of syphilitic coma on the other hand, appears to be the extreme rapidity of the course of events in the former class, while this is much slower in the latter. When a specific deposit takes place in the basilar artery, therefore, it seems that much more time is required for producing occlusion of the vessel than is the case in ordinary inflammation or thrombosis. For the same reason I should expect that, in addition to the occlusion of the vessel in a fatal case, there would also be found some degree of softening in the pons and bulb. While, therefore, there appears good reason to believe that syphilitic coma is owing to specific disease of the basilar artery, I admit that this view still stands in want of corroboration by actual inspection.

(*To be concluded.*)

AMERICAN GYNÆCOLOGICAL SOCIETY.

Eleventh Annual Meeting, held in Baltimore, Tuesday, Wednesday, and Thursday, September 21, 22, and 23, 1886.

The President, Dr. Thaddeus A. Reamy, of Cincinnati, in the Chair.

(*Concluded from page 413.*)

The Influence of Mental Impressions on the Fœtus.—Dr. Barker read a paper in which he said that medical writers, with hardly an exception, down to the beginning of the eighteenth century had expressed the belief, with more or less distinctness, that fœtal marks and deformities were due to the emotions, desires, or shocks of the pregnant mother. Reference was then made to numerous papers written within the past twenty years in which this theory was strongly controverted. Those who disbelieved in this doctrine based their skepticism on what they regarded as physiological reasoning, and chiefly on the assertion that there was no direct nerve connection between the maternal and fœtal systems. Deformities they urged were due to arrest of development; but no one had brought forward sound physiological reasons why this arrest of development might not have been caused by mental impressions affecting the fœtal nutrition by their influence on the maternal blood. Extremely rare as was the occurrence of cases which proved the result of this influence, the author considered the fact to be so well proved by authentic evidence as to make it as certain as any other fact which could not be explained by science. The term "mental impressions" should include those which had a physical as well as a psychical origin. Five cases coming under the author's observation were related.

The first case was that of a young lady who, at the age of eighteen, had for the first time been taken to the theatre and had seen Sothern in the part of Lord Dundreary. From that time she had spent her whole time in writing to Lord Dundreary, and she had thought and talked of nothing else. This had continued several months, but, under treatment and change of scene, had gradually worn away. She subsequently married, and, four years after her attack of insanity, her first child, a boy, was born. As the child grew older he exhibited peculiarities resembling those of Lord Dundreary. He walked with a little skip, and had a slight stammer in his speech, and his left brow was drawn down with the lids practically closed.

The second case was that of a lady, a typical brunette, who was first married to a gentleman of light complexion. She was never pregnant by him. After his death she married a gentleman as dark as herself. Her first child was decidedly light. Both her own and her husband's relatives were all light-skinned. The lady had since had three children, all dark.

The third case was that of a lady who, during the first month of pregnancy, had been much worried over her oldest daughter, who had had her ears bored for rings. The ears had become inflamed and caused much trouble. When the child was born, both ears presented the appearance of having been pierced for rings, and through at least one of the lobes a thread could be passed.

Case fourth was that of a lady who at a very early period of pregnancy had been much impressed by seeing three ladies all of whom had hare-lip. When her child was born it had a double hare-lip.

Case fifth, Mrs. X., married but a few weeks, was at the theatre with her husband. Something vexing him, he had placed the point of his elbow on her hand and held it so firmly that she could not draw it away. Not wishing to make a scene, she had borne it until she fainted. The fingers were much swollen and painful for several days. She never lived with her husband afterward. Thirty-five weeks and three days after the theatre incident she gave birth to a son. On the left hand, the first and second phalanges of all the fingers and thumb were absent, looking as if they had been amputated. During her pregnancy she had never thought that her child would be born with any deficiency.

Other (reported) cases were then referred to.

Dr. Goodell related the following case: A physician was called upon to assist at the operation of circumcision. His wife, who was in the early months of pregnancy, was much interested in the operation, and insisted upon hearing all the details of it. When her child was born, a boy, it was found that the glans was exposed and the prepuce well retracted, with granulating edges, showing the appearance very similar to that of a recent circumcision.

He had recently seen an almost identical condition in a child, which could not be accounted for by any impression on the mind of the mother.

Dr. Busey believed that there was some relation between mental impressions and fœtal deformities. Any prevalent and concurrent belief must be based upon an element of truth. If there were any number of cases by which a precise correspondence between the impression and the deformity could be shown, the relation must be accepted as presumptively proved. Dr. Barker had cited some instances and Dr. Goodell had given another case. In another case the mother, while pregnant, had seen a man with an opening in his trachea from which a tracheotomy tube had been removed. The child when born exhibited a depression in the same position. Another case was reported where the mother had received two distinct impressions and the child was born with two distinct deformities corresponding to the separate impressions received. In another case the father had removed, in the presence of his mother, a metacarpal bone of one of the fingers. When the child was born it exhibited a corresponding deformity. A consideration of these cases could bring us to but one conclusion.

The Treatment of Procidentia Uteri by the Galvano-cautery.—Dr. John Byrne, of Brooklyn, read a paper on this subject. He said that operations on the perinæum could only influence the prolapse by offering an obstacle to vulvar protrusion, and only when a portion or the whole of the cervix was removed could we look for permanent and satisfactory results after operation on the perinæum.

In February, 1872, Mrs. H., the mother of four children, presented herself with the entire womb and vesico-vaginal wall protruding. She was thirty-five years of age. The cervix was ulcerated from the friction. She was treated for two months by applications of glycerole of tannin and irrigation. The ulceration was healed, but no impression was made on the prolapse, or on the size of the uterus, which measured four inches and a half. The cervix was then removed with the galvano-cautery loop. The patient recovered without a bad symptom. Five weeks later there was no bulging of the vesico-vaginal septum, and the uterus could just be reached with the finger. No reasonable amount of force by means of a volsella could draw it down. The patient was discharged cured, and had continued well.

The whole number of cases treated with the galvano-cautery had been nine, but in three only had the cervix been removed. In six of the cases linear cauterizations were required.

The speaker highly recommended further trial of the galvano-cautery in this class of cases.

Electricity in Gynæcological Practice.—Dr. Engelmann referred to the following points which should govern the use of electricity as a therapeutic agent: The formation of strict indications for the use of the galvanic and faradaic currents; a differentiation between the varying forms and modifications of the galvanic and faradaic current; differentiation between the active and indifferent pole; the localization and concentration of the current, the precision of the dose, the use of stronger currents continued for a short time. He had used the galvanic or faradaic current in the reduction of the size of neoplasms, fibrous polypi, cystic growths, and urethral carbuncles; also in chronic pelvic inflammation and in chronic ovarian inflammation; in stenosis of the os, for the relief of the engorgement accompanying subinvolution; in prolapse when due to relaxation of the tissues. It was an aid in the correction of various forms of displacement, in metrorrhagia when due to inflammation and relaxation, in certain forms of amenorrhœa, and for the relief of many annoying reflex symptoms. In obstetrics it was useful in uterine inertia during or after labor, in cases of weak and irregular labor-pains, in post-partum hæmorrhage, in delayed involution, in paralysis of the urethra or bladder after labor, and in the interruption of extra-uterine pregnancy.

The only contra-indication to the use of electricity was the presence of severe acute inflammation. It might be used in sub-acute inflammation. In the more acute pelvic inflammations, care was required in its use.

A number of cases were then referred to showing the beneficial effect of electricity in diminishing the size of fibroid tumors, and in other conditions.

Electrolysis in Gynæcological Surgery.—Dr. Baker read a paper on this subject. The speaker referred more particularly to the use of electrolysis in cases of fibroid tumor, and laid down the following rules for the performance of the operation: It should not be employed within a week before or after menstruation. An anæsthetic should be administered. It was better to use electrolytic needles for both the positive and negative poles; the operator should be absolutely sure of the cleanliness of the needles; the needle should be deeply buried in the tumor in order that the current might be insulated from the parts outside of the growth; the insertion of the needle should be made at the most prominent part of the growth, whether that was in the vagina or in the abdominal wall; the needles should not be too nearly approximated; if both needles were properly placed, the position of the two poles made no difference; the circuit being completed, the number of cells should be gradually increased from four to twenty or thirty (a more exact means of determining the strength of the current would be the galvanometer, but this had not given him accurate results); the length of time during which the application was continued should be from ten to twenty minutes, and should be determined by the character of the pulse. When the pulse became slower and weaker than normal, the number of cells should be diminished or the current discontinued. The current should be diminished gradually and the wires should be disconnected at the battery before the needles were removed. The applications should not be made at the surgeon's office. After the application, the patient was to be put to bed, where she was to remain for one week. With such precautions, the speaker had never seen shock after the operation. A single treatment was often all that was necessary. He had never found it necessary to make more than three applications, and the latter number in only one case. There should be an interval of at least from one to three months between the applications. The use of electrolysis was also of service in the treatment of inflammatory effusions. Before resorting to electrolytic puncture, the application of the galvanic current should be tried, as it did not require an anæsthetic and avoided the slight risk which accompanied even small wounds.

The following conclusions were presented:

1. Electrolysis was a useful agent in the treatment of certain cases of fibroid tumors of the uterine walls and of chronic circumscribed perimetric effusion. 2. When applied to fibroid tumors of the uterus, electro-puncture was a most reasonable and efficient method. 3. In the treatment of fibroid tumors by this agent, it was unnecessary to apply it often. 4. Cases of perimetric effusion to be treated by this method should be selected with care in reference to the absence of all acute symptoms.

Dr. Chadwick had tried electrolysis ten years ago in one case of fibroid tumor, introducing the needle through the abdominal wall. This had caused a smart attack of peritonitis. During the following year there had been no decrease in the size of the tumor. He had also seen abscess follow its use.

Dr. Engelmann said that the dangers mentioned by Dr. Chadwick were those which were liable to follow puncture through the abdominal wall. By puncturing through the vagina and, if possible, through the tissue of the uterus, the dangers of inflammation which accompany abdominal puncture were avoided.

Dr. James B. Hunter, of New York, could not say that he had seen one case of fibroid tumor permanently relieved by electrolysis. In one case in which it was freely used by Dr. Freeman and himself he had subsequently operated and removed the tumor by hysterectomy, the patient making a good recovery. He could find no evidence of the effect of the current on the tissue of the fibroid.

Dr. Mann had employed this agent in one case, plunging one needle into the tumor from behind through Douglas's *cul-de-sac* with a sponge electrode over the tumor on the outside. The current was kept up fifteen minutes. Six applications were employed. The size of the tumor was much diminished, and the tenderness and pain were lessened. The patient was now able to attend to her duties.

Persistent Pain after Abdominal Section.—Dr. Hunter read a paper in which he said that abdominal section was, as a rule, performed for pain, and, if this still persisted, one of the objects of the operation was not accomplished. Pain before operation might be due to various causes. It might be located in the ovaries, when it would be increased by menstruation. Disease of the tubes was a cause of pain in a large number of cases. The pain of peritonitis was of great importance. The presence of adhesions interfering with the mobility of the intestines and other organs was a frequent cause of pain. A severe form of pain might also be caused by displacements of the uterus. Abdominal section was performed for the relief of pain, and the organ at fault was successfully removed and the patient recovered, but the pain continued. If there was no marked relief at the expiration of twelve to eighteen months, if the patient had been favorably situated, the operation might be pronounced a failure so far as the patient was concerned. Such pain might be due to former peritonitis, to peritonitis following the operation, or to some defect in the abdominal wall. Many patients who had been cured of diseases endangering life still suffered pain. Peritonitis following the operation was a cause of pain in a certain number of instances. A slight amount of peritonitis often occurred after abdominal section, and it might leave some slight adhesions interfering with the mobility of the viscera. Inflammation in the region of the stump often caused its attachment to the abdominal wall, and thus caused pain. Sometimes the uterus was fixed by inflammation, and the distension of the bladder caused pain. Pain might result from defective union of the abdominal incision allowing of a ventral hernia. Pain in the cicatrix might occur as in other situations. In the way of prophylaxis, the utmost precaution should be taken to prevent the development of peritonitis. The early and judicious use of drainage and irrigation would go far toward preventing inflammation. The cold coil with antipyrine should be resorted to if there were any indications of peritonitis.

The following conclusions were given:

1. In all cases of abdominal section done for the relief of pain the patients should be carefully followed up for at least two years, and not counted as cured simply because the operation had not been fatal. 2. Peritonitis following operation was to be dreaded as much for its remote consequences as for its immediate danger. 3. Extreme caution was demanded when the operation was undertaken where the physical signs of chronic peritonitis existed. 4. Secondary operations, as a rule, were of no value, although occasionally they might afford relief. 5. Where the operation was done for the relief of pain, a guarded prognosis should be given. There were certain chances that a perfect cure would not result, even if the operation itself was entirely successful.

Dr. Skene said that he thought more pain followed the ligature than the cautery clamp. The cautery, as a means of treating the pedicle, had never been thoroughly tried in this country. With regard to what constituted success after abdominal section, he said that many of the cases which he had reported as failures had subsequently turned out to be most successful.

Dr. Wylie said that in chronic peritonitis there was often some cause which kept renewing the inflammation. In many of the cases of pain after operation the pain was due to imperfect operation. Sometimes a small portion of diseased tissue was left. Sometimes the inflammation centered around a ligature, leading to abscess and the formation of a sinus. In some of these cases the trouble could be cured by dilating the sinus and fishing out the ligature. In many cases the peritonitis was due to the bursting of a small cyst. Again, in cases where there was chronic inflammation of the lining membrane of the uterus, this was not always cured by removal of the tubes and ovaries. It might cause pain, not only in the uterus, but in a reflex way in other parts of the body. These pains could often be cured by dilating the uterus and applying carbolic acid.

Dr. Battey said that the speaker had said that, at the end of twelve or eighteen months, we should give up these cases as failures; but he would qualify that statement by more than doubling the limit. Some of the cases which were most unsatisfactory at the end of a year had furnished the most gratifying cures by the lapse of time. Among the causes which produced this neurotic condition he was inclined to rank, in the first place, an acquired neurotic habit from long suffering. In looking for causes, he had been much struck by one point, that alluded to by Dr. Skene, that was the use of the ligature, and especially a ligature rather loosely tied. He had formerly used a method which had not been alluded to, and that was the separation of the ovary from its attachment by the écraseur. In these cases he had not seen any of these troublesome neuroses, and there was no hæmorrhage. He had seriously considered a return to this method of treatment. With regard to a second opening of the abdomen, he called attention to the fact that, by a simple opening of the abdomen, purely for diagnostic purposes, unaccompanied by any great disturbance of the parts, the condition of the patient was often greatly improved, especially as regarded pain.

Dr. H. P. C. Wilson was satisfied that in the majority of cases the condition was due more to the neurotic element than to the operation. Most of these were long-standing cases where the mental condition had become so morbid that the patient was almost insane on the subject of her ovaries and tubes. Even if these organs were removed, the neurotic condition might remain for a long time.

Dr. Hunter regarded the neurotic condition as secondary. As regarded chronic metritis, he was willing to admit that his limit was too short and should be extended to two or three years. It was not well to expect any improvement after removal of the ovaries and tubes for at least twelve months, for it took that length of time for the system to become accustomed to the changed condition.

The Blue Discoloration of the Vaginal Entrance as a Diagnostic Sign of Pregnancy.—Dr. Chadwick read a paper including notes of four hundred and forty cases examined. He divided the discolorations into four groups: 1. Doubtful, where it was so faint that he could not be certain of its presence. 2. Suggestive, where it was more marked. 3. Characteristic, where the discoloration, though faint, was confined to the anterior wall of the vagina, and more particularly to the urethra, just below the meatus and on either side of the meatus. In every instance where this was present the woman was pregnant with one exception. 4. Marked, where the congestion had become deep and exhibited the appearance constantly seen during pregnancy. He did not maintain that the characteristic discoloration was seen in every case, but, if carefully looked for, it would be found quite pronounced in the majority of cases. The color varied from a violet to a dark, dusky, almost black color.

Dr. Wilson considered this one of the most valuable means of diagnosticating pregnancy in the early stages. It was invaluable in cases where women wished to deceive the physician.

Dr. Skene said that this had seemed to him to be a most reliable sign in the early months of pregnancy.

Dr. Johnson remarked that some years ago he had referred to this point, and the discussion which followed seemed to indicate that the discoloration was a congestion produced by interference with the return of the venous circulation by the pressure of the enlarged uterus. It was held that the same discoloration could be produced by any other tumor which would have the same effect as the gravid uterus.

Dr. William H. Parrish, of Philadelphia, had noted that in primiparæ, where involution of the vagina took place completely, the discoloration disappeared with corresponding rapidity. Where there was subinvolution, the blueness might continue for a longer time.

Dr. Chadwick had failed to notice any persistence in the discoloration described. The general discoloration might persist, but this characteristic blueness would, he thought, be found to disappear. He had looked for this sign in forty or fifty cases of fibroid tumor and had not found it in a single instance.

Supra-vaginal Hysterectomy.—Dr. Sutton exhibited the specimens from three cases, and made some general remarks on the operation.

Dr. Wylie held that in many cases of fibroid tumor where hysterectomy had been performed for hæmorrhage, curetting the cavity of the uterus would have obviated the necessity for the operation. Where there was hæmorrhage, granulations were nearly always present. With the curette, not only might the hæmorrhage be brought to a normal standard, but he had seen the tumor diminish in size. There were some cases in which, if hysterectomy was not performed, the patient would die as the result of the hæmorrhage.

The President said that curetting was much more likely to be followed by septicæmia when there was a fibroid tumor of the uterus than when the operation was done for ordinary fungous granulations. He believed that curetting under such circumstances would be almost as dangerous as the removal of the tumor.

Dr. Wylie remarked that he invariably used antiseptics before the operation and douched the cavity afterward. He had never seen septic poisoning in any case of curetting, and he would not hesitate to use the instrument in any case of fibroid tumor with hæmorrhage. He used the bichloride solution, one to two thousand in the vagina, and one to five thousand in the uterus.

Dr. Wilson believed that, where there was excessive hæmorrhage from a fibroid tumor, there was no remedy so efficient as the curette. He had never seen any evil results from its use.

Dr. Reeve asked if any of the members had had any experience with incision of the cervix in the treatment of fibroid tumors. This was highly recommended some years ago.

Dr. Sutton had tried division of the cervix and had stopped the hæmorrhage, and had seen rapid fatty degeneration of the tumor occur in one case.

The High Mortality of the Recent Cæsarean Operations in the United States, with the Report of a Case.—Dr. Parrish related the history of a case in which the operation was performed after an unsuccessful attempt to extract the child by craniotomy. The woman died from exhaustion and rapidly developing septicæmia twelve hours after the operation. At the autopsy the lips of the uterine incision were found in contact. Three dense intramural fibroid tumors were found.

Dr. Parrish then referred to the great mortality of this operation in the United States, and presented the statistics of Dr. Robert P. Harris, of Philadelphia, of which the following is a synopsis: Cæsarean operations in the United States, 144. Women saved, 37·5 per cent., 54. Children living when extracted, 64. First fifty operations, saved, 54 per cent. Second fifty operations, saved, 24 per cent. Operations performed in good season, when the condition of the woman was favorable, had in this country saved 75 per cent. of the women and 80 per cent. of the children.

The following rules were then given for the performance of the operation: 1. Carefully determine the degree of obstruction and operate early in labor, as soon as the os is sufficiently dilated to permit drainage, and before the rupture of the membranes. 2. Operate with full antiseptic precautions, but the spray over the abdomen is unnecessary. 3. Control hæmorrhage by compression of the neck of the uterus, either with a rubber tube or manually, preferably by the latter means. 4. Introduce numerous deep and superficial sutures so as to approximate accurately the muscular walls of the uterus, but do not carry the sutures into the endometrium. Removal of a section of the muscular wall is unnecessary. 5. Protect the peritonæum from the discharges, and, if it becomes soiled, it should be carefully cleansed. 6. Ergotine should be administered at the beginning of the operation.

The President remarked that in three thousand cases of labor he had never done a Cæsarean section or any of its modifications. It was just coming to be recognized that craniotomy was not to be performed in any but the rarest instances, and that the sacrifice of life was unjustifiable.

Dr. Parrish agreed with the president that craniotomy should be an operation of exceeding rarity. The people were not yet ready in this country to accept the Cæsarean section, but one of the great troubles was with the general medical profession, who regarded this as an operation almost necessarily fatal.

Book Notices.

Milk Analysis and Infant Feeding. A Practical Treatise on the Examination of Human and Cows' Milk, Cream, Condensed Milk, etc., and Directions as to the Diet of Young Infants. By Arthur V. Meigs, M.D., Physician to the Pennsylvania Hospital and to the Children's Hospital, etc. Philadelphia: P. Blakiston, Son, & Co., 1885. Pp. 102. [Price, $1.]

The author of this book has examined the chemical constitution of human and cows' milk, and recorded his conclusions in the volume before us. His method, briefly stated, is to remove the fat by ether and alcohol, coagulate the casein, and remove the sugar and salts by careful washing and evaporation, and then drying and weighing the residue. He finds that by this method the amount of casein in human milk is about one per cent., while that of cows' milk is about three per cent.; and that, by adding one third lime-water to the latter, the coagulum is made to resemble in its behavior that of human milk. From a study of the subject, he advises the following way of treating cows' milk so as to render it similar in its constituents and in behavior under reagents to mother's milk: Packages of reliable pure milk-sugar, each containing 17¾ drachms, are obtained, and the contents of one of these packages is dissolved in a pint of water. When the child is to be fed, two tablespoonfuls of cream, one tablespoonful of milk, two tablespoonfuls of lime-water, and three of the sugar-water are to be mixed warmed.

It will be noted that Dr. Meigs's analysis places the amount of casein in human milk much lower than any other, and it must remain for other examinations to confirm or disprove his conclusions. We fear, however, that he has placed the amount of casein too low. This work, nevertheless, is entitled to a careful study, and is a commendable attempt to place infant feeding upon a more scientific basis.

Manual of Operative Surgery. By W. Arbuthnot Lane, M.D., M.S., F.R.C.S., etc. London: George Bell & Sons, 1886. Pp. ix–276. [Price, $2.25.]

In reviewing a small volume which professes to be a manual of surgery, it is impossible to consider fully each subject presented without making too extended a notice. The first and second sections treat of amputations of the upper and lower extremities. The various steps of the operations are given, and the parts cut through minutely described. No comparisons are made as to the advantages of one operation over another.

Sections 3, 4, and 5, on excisions of bones and joints, omit much that might have been said, particularly on excision of the maxilla. Some of the operations for removal of certain organs are mentioned in Section 6, while others are enumerated in other sections. This arrangement is not convenient, to say the least. Sections 7 to 10, treating of ligature of vessels, are the best in the book, the steps of the operations, the anatomical relations, and the collateral circulation being carefully considered. The subsequent sections relate to the division of muscles and tendons, and the special operations on different organs.

The author states in the preface that he has "omitted to give requisite details as regards antiseptic treatment, as it would necessitate too much repetition." This we consider an unfortunate omission, and one which detracts from the value of the book. Certainly a section might have been devoted to this important subject.

Spinal Deformity in Relation to Obstetrics. By A. H. Freeland Barbour, M. A., B. Sc., M. D., F. R. C. P. E., Assistant to the Professor of Midwifery in the University of Edinburgh, etc. Being a Thesis for Graduation in Medicine at the University of Edinburgh for which a Gold Medal was awarded in 1883. Edinburgh and London: W. & A. K. Johnston. 4to, pp. vi–35; 38 plates.

This is one of the elaborate and handsome publications relating to obstetrics and gynæcology for which Edinburgh is coming to be well known. It is not common, at least in this country, for an inaugural thesis to deal with such intricate subjects as the relations of spinal distortion to deformities of the pelvis. The fact that Dr. Barbour entered while yet a pupil upon so difficult a work must have given promise of his further activity in research—a promise that has been amply confirmed by his part in the preparation of the excellent "Manual of Gynæcology" which subsequently appeared as the joint production of himself and Dr. Hart. The handsome quarto now under notice includes important additions to the thesis. The author's study of the subject has been largely in the direction of examinations of specimens, and particularly of frozen sections of the body of a kyphotic woman who had died of post-partum hæmorrhage. The work is a most notable addition to the literature of obstetrics, and exceedingly creditable to its author.

The Nature of Mind and Human Automatism. By Morton Prince, M. D., Physician for Nervous Diseases, Boston Dispensary, etc. Philadelphia: J. B. Lippincott Co., 1885. Pp. x–173. [Price, $1.50.]

The basis of this work was written some eight or nine years ago, while the author was yet a student at the medical school. Over two years ago it was enlarged, and is now published at the suggestion of some of the author's friends.

Much of the opposition to the so-called materialistic philosophy, particularly as applied to the elucidation of mental phenomena, is directly attributable to false expositions of the doctrines themselves. In the preparation of this treatise the author has been actuated by a laudable desire to harmonize hitherto conflicting facts and statements; and he is led to hope that his efforts in this direction have served to remove the really valid objections to materialism. Chapter I is devoted to a discussion of the modern doctrine of the relation of the mind to the body, Chapter IV treats of the nature of the mind, and the correlation of forces is discussed in Chapter V. The second part of the book deals with "human automatism"; and it is in the last chapter of this portion of the work that the author's opinions regarding the true nature of materialism are given an exhaustive exposition. The work is conceived in a thoroughly scientific spirit, and is well written.

The Student's Manual of Venereal Diseases. Being a Concise Description of those Affections and their Treatment. By Berkeley Hill, M. D., Professor of Clinical Surgery in University College, London, etc., and Arthur Cooper, M. D., Surgeon to the Westminster General Dispensary, etc. Fourth Edition, Revised. Philadelphia: P. Blakiston, Son, & Co., 1886. Pp. xiv–17 to 132. [Price, $1.]

The excellence of this little book is sufficient reason for its having reached its fourth edition. The authors have covered the whole ground of venereal diseases in the one hundred and twenty-five pages, and have done it so cleverly that the matter does not seem unduly concise. It is a valuable book for the student, as brief descriptions are given in it of all the venereal diseases and allied disorders. The directions for treatment are judicious. There are twelve pages of formulary, which will be found of use not only to the student, but also to the practitioner. The lack of an index is largely compensated for by a full table of contents. On the whole, the book is eminently satisfactory.

GENERAL LITERARY NOTES.

An Italian translation of Eulenburg's "Real-Encyclopädie" is announced. —— Mr. George S. Davis, of Detroit, has begun the publication of a series of low-priced works, under the title of "The Physicians' Leisure Library." Four of them have come under our notice, the authors being M. Dujardin-Beaumetz, of Paris, and Dr. W. A. Hammond, Dr. G. H. Fox, and Dr. H. G. Piffard, of New York. The subjects treated of are all well presented, and the brochures have a very neat appearance.

Among recent foreign publications we note the following:

Baillière, Tindall, & Cox, London.—H. G. Sutton, "Hand-book of Medical Pathology." (5*s.*)

J. B. Baillière et Fils, Paris.—E. Alliot, "La suggestion mentale et l'action des medicaments à distance." (1*fr.* 50.) —— A. Pousson, "De l'ostéoclasie." (5*fr.*) —— T. Gallard, "Pathologie des ovaries." (8*fr.*) —— A. Ferrand, "Traité de thérapeutique médicale." (9*fr.*) —— L. Hugounenq, "Les alcaloïdes d'origine animale." (2*fr.*)

A. Delahaye et E. Lecrosnier, Paris.—De Lapersonne, "Des arthrites infectieuses non tuberculeuses." (3*fr.* 50.) —— Curtil-Boyer, "Du traitement chirurgical des calculs vésicaux chez la femme." (2*fr.* 50.) —— E. Forgue, "Des septicémies gangréneuses." (3*fr.* 50.) —— L. Grellety, "Vichy et ses eaux minérales." (3*fr.* 50.) —— F. Lagrange, "Valeur thérapeutique de l'élongation des nerfs." (5*fr.*) —— G. Legris, "Du sulfate de spartéine." (3*fr.*) —— Panas, "Nouvelles leçons sur les paralysies des muscles de l'œil." (2*fr.*)

O. Doin, Paris.—A. de Keersmaecker, "Le sens des couleurs chez Homére."

J. F. Bergmann, Wiesbaden.—E. Lang, "Vorlesungen über Pathologie und Therapie der Syphilis." (16*M.*) —— J. Eisenberg, "Bakteriologische Diagnostik." (5*M.*)

Carl Gerold's Son, Vienna.—W. Biedermann, "Elektromotorisches Verhalten der Muskelnerven bei galvanischer Reizung." (70*Pf.*)—— P. Knoll, "Ueber die Druckschwankungen in der Cerebrospinalflüssigkeit und den Wechsel in der Blutfülle des centralen Nervensystems." (2*M.*)——C. Laker, "Beobachtungen an den geformten Bestandtheilen des Blutes." (60*Pf.*)

Lipsius & Tischer, Kiel.—F. Esmarch, "Samariterbriefe." (1*M.* 20.)

F. Vallardi, Milan.—R. De Luca, "I microparassiti della balanopostite."——R. Guaita, "Lo spasmo della glottide sintomatico di disturbi gastro-intestinali."

S. Schottländer, Breslau.—M. Rugard, "Verlauf und psychisches Gemälde eines Nervenleidens." (1*M.* 50.)

E. Detken, Naples.—A. Stravino, "La iperemia abituale e la flogosi nei genitali delle meretrici."

BOOKS AND PAMPHLETS RECEIVED.

Elements of the Comparative Anatomy of Vertebrates. Adapted from the German of Robert Wiedersheim, Professor of Anatomy in the University of Freiburg-in-Baden, etc. By W. Newton Parker, Professor of Biology in the University College of South Wales and Monmouthshire. With Additions by the Author and Translator. 270 Woodcuts. London and New York: Macmillan & Co., 1886. Pp. xxvi–345. [Price, $3.]

Medical Communications of the Massachusetts Medical Society. Vol. xiii, No. v, 1886.

Elephantiasis Arabum of the Labia Majora. A Case of Successful Operation by Excision. By Henry L. Raymond, A. M., M. D., Assistant Surgeon, U. S. Army. [Reprinted from the "American Journal of the Medical Sciences."]

How we treat Wounds To-day. A Treatise on the Subject of Antiseptic Surgery which can be understood by Beginners. By Robert T. Morris, M. D., late House Surgeon to Bellevue Hospital, New York, etc. Second Edition. New York and London: G. P. Putnam's Sons, 1886. Pp. x–164. [Price, $1.]

The Electric Light as an Illuminator: The Effect of Strong Light on the Eye. By J. Alfred Andrews, M. D., Ophthalmic Surgeon to Charity Hospital, New York, etc. [Reprinted from the "Medical Record."]

Transactions of the Medical Society of the State of New York for the Year 1885.

Report on Classification of Mental Diseases as a Basis of International Statistics of the Insane, made to the Belgian Society of Mental Medicine. By Clark Bell, Esq.

A Treatise on the Principles and Practice of Medicine; designed for the Use of Practitioners and Students of Medicine. By Austin Flint, M. D., LL. D., Late Professor of the Principles and Practice of Medicine and of Clinical Medicine in the Bellevue Hospital Medical College, New York, etc. Sixth Edition, revised and largely rewritten by the Author, assisted by William H. Welch, M. D., Professor of Pathology in Johns Hopkins University, Baltimore, and Austin Flint, M. D., LL. D., Professor of Physiology in the Bellevue Hospital Medical College, New York. Philadelphia: Lea Brothers & Co., 1886. Pp. 1160.

Hand-book of Diseases of the Ear, for the Use of Students and Practitioners. By Urban Pritchard, M. D. (Edin.), F. R. C. S. (Eng.), Professor of Aural Surgery at King's College, London, etc. With Illustrations. Philadelphia: P. Blakiston, Son, & Co., 1886. Pp. xi–207. [Price, $1.50.]

Massage as a Mode of Treatment. By William Murrell, M. D., F. R. C. P., Lecturer on Pharmacology and Therapeutics at the Westminster Hospital, London, etc. Philadelphia: P. Blakiston, Son, & Co., 1886. Pp. vi–78. [Price, $1.]

On the Radical Cure of Inguinal Hernia. A Review of the Existing Status of the Operation, with Remarks on its Past History. By John B. Hamilton, M. D., Supervising Surgeon-General of the Marine-Hospital Service, etc. [Reprinted from the "Journal of the American Medical Association."]

Some Points in the Physiology of Attention, Belief, and Will. By James Cappie, M. D. [Reprinted from "Brain."]

Lehrbuch der Physiologie für akademische Vorlesungen und zum Selbstudium. Begründet von Rud. Wagner, fortgeführt von Otto Funke, neu herausgegeben von Dr. A. Gruenhagen, Professor der medizin. Physik an der Universität zu Königsberg i/ Pr. Siebente, neu bearbeitete Auflage. Mit etwa Zweihundertundfünfzig in den Text eingedruckten Holtzschnitten. Zwölfte Lieferung. Hamburg u. Leipzig: Leopold Voss, 1886. Pp. 401 to 560 inclusive.

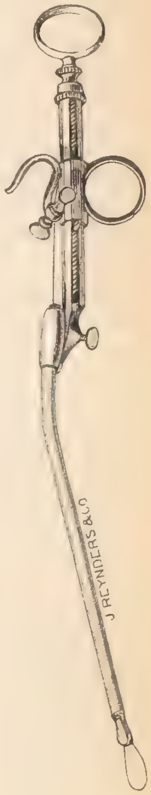
Thirteenth Annual Report of the Secretary of the State Board of Health of the State of Michigan for the Fiscal Year ending September 30, 1885.

Proceedings and Addresses at the Sanitary Convention held at Kalamazoo, Mich., June 1 and 2, 1886.

New Inventions, etc.

A MODIFICATION OF THE SCHRÖTTER SNARE.

By G. B. Hope, M. D.



The accompanying cut represents a modification of the Schrötter nasal polypi snare, by which a wider range of application will be allowed in enabling it to be used as an écraseur, in cases where this may be required, as well as an evulsion instrument—so thoroughly satisfactory in the hands of those who employ it. It will be seen that a change in the outline of the instrument has been made, permitting the present handle to be readily converted into that shown in the illustration.

The shaft is tunneled to admit a long screw, which works by the turn of the thumb ring at the extremity, and a nut, having lateral feathers projecting through a slit-opening along the sides of the handle and acting on the shoulder of the slide, draws the wire attachment home within the head of the cannula, and so completes the division of the tissue. The tip of the instrument has necessarily been altered by cutting away the interval between the two eyes through which the wire is threaded, to allow the loop to enter far enough within the cannula, and at the same time be prevented from pinching by a rivet inserted through the tip at a sufficient distance from the point.

The play of the wire by means of the slide is always free, and the screw action is only employed where a cutting of the tissues is advisable.

The plan of the adaptation to the Schrötter instrument was carried out by J. Reynders & Co.

34 West Fifty-first Street, *October 1, 1886.*

Miscellany.

Vaccination in West Africa.—Mr. C. H. Eyles, of the British service at the Gold Coast Colony, writes to the "Lancet" as follows:

"Your remarks about the faith of the natives of East Africa in vaccination are equally applicable to West Africa—at least, so far as the Gold Coast is concerned. On examining some 150 men of the Hansa constabulary, with a view to vaccinating them, I found that at least one third of them had been vaccinated 'in our country,' which comprises a large tract, including Sokots, Dagomba, Salaga, and other places but little known to Europeans. On one occasion one of these native vaccinators brought me three of his children to vaccinate, and intended taking them immediately into the interior as 'sources of lymph.' He, however, declined my offer of a few tubes, on the ground that the people in the interior would deem it 'white man's fetish. Along the coast, however, where the native comes into immediate contact with the white man, this prejudice does not exist."

How to Increase the Bodily Weight.—In a little pamphlet entitled "Brief Practical Directions for Exercising and Using the Developing Apparatus in the Pratt Gymnasium, Amherst College," we find the following:

"Exercise all the muscles moderately for a short time daily. Do not become greatly fatigued. Take a short spray bath, with moderately cool water, two or three times a week. Avoid excessive mental exercise, study, or worry. Do things quietly and moderately and not with a rush. Lie down and rest, or sleep for half an hour after dinner and supper if possible. Do not study soon after eating. Practice deep breathing and holding the breath, to exercise the diaphragm and stomach. Retire early at night and sleep as long as possible. If sleepless from brain work, eat a few graham crackers before retiring, to draw the excess of blood from the brain to the stomach. Then bathe the head and back of neck with cold water, and if necessary the feet also and rub them briskly till red and dry. Eat slowly and freely, thoroughly chewing the food. Choose especially the following varieties of food. If any of them causes indigestion take less of that one. Sugars, syrups, and all sweet things. Fats, fat meats, and soups. Sweet vegetables of all kinds. Corn-starch, tapioca, and all puddings, cakes, candies, and nuts, tea, coffee, chocolate, and cocoa diluted with much milk and well sweetened. Cream and new milk. Butter, eggs, and condiments. All other foods may be indulged in to the extent of the inclination. Chewing gum daily before eating and between meals increases the flow of saliva, and so aids the digestion of fat-making foods. It also indirectly stimulates the secretion of the digestive juices of the stomach."

The Massachusetts Medical Society.—A meeting of the Section in Clinical Medicine, Pathology, and Hygiene, of the Suffolk District Branch, was held in Boston on Wednesday evening of this week. The programme included remarks by Professor W. T. Sedgwick, of the Institute of Technology, on "The Filtration of Potable Waters, with reference to the Elimination of Organic Germs," and the exhibition of a number of different filters, one of which was stated to be the only micro-membrane asbestos filter in the country.

The University of Wurzburg.—According to the "Progrès médical," Dr. Oberst, of the Halle faculty, has been nominated ordinary professor of surgery at Würzburg.

The Pasteur Institute.—The "Gazette hebdomadaire de médecine et de chirurgie" reports that the fund thus far subscribed for in aid of the "Institut Pasteur," of Paris, amounts to 1,500,000 francs.

Mesmerism and the Telephone.—M. Henri Möhlenbruck, writing to "L'Électricien," describes some very remarkable experiments which he has recently performed, and which seem to show that in the mesmeric condition an electric current may have a powerful inductive action upon the human nerves. The experiments were made with an apparatus consisting of a ring of iron wires, surrounded with silk-covered copper, the latter being placed in circuit with a microphone and a battery-cell. The ring was about nine inches in diameter. In the first experiment a watch was placed near the microphone, and the ring was put upon the head of the mesmerized subject. He immediately began to beat time with the ticking of the watch. When the microphone contact was touched with a quill feather he placed his fingers in his ears. The microphone was then removed to a distant apartment, and, the connection of the circuit being completed as before, a violin was played in the distant room; the patient showed the most distinct indications that he heard the music, The next experiment was obviously to speak to the microphone. "To my great surprise," says M. Möhlenbruck, "the patient repeated the words." The last experiment described is that of sending a continuous current through the circuit. This had the effect of causing the patient to throw his arms around in a circle in the vertical plane. The direction of motion was reversed with the reversal of the current. When the patient was asked what he felt like, he said he was turning. M. Möhlenbruck concludes his letter by stating that he has made a great many more experiments not less interesting than these, and has constructed many different kinds of apparatus to aid in these researches. He promises to give further details if they appear of scientific value. . . . "In future we shall," says the London "Electrician," "be able to conduct telephonic communication with only a transmitter and a mesmerized boy. These researches, nevertheless, seem to bring out an important fact to which Sir W. Thomson has devoted some study. It will be remembered that he failed to notice any psychological effect on placing the human head between powerful magnets."—*The Electrical World.*

The Wells & Richardson Co.'s Lactated Food.—Dr. W. H. Rassman, of the North Eastern Dispensary, under date of August 1, 1886, reports as follows: "Impressed with the importance of the proper feeding of infants, I determined to make as thoroughly as possible a series of comparative clinical tests, both in the North Eastern Dispensary and in private practice. I obtained eleven varieties of food, using of each one or more packages, according to the duration of the case. I used as little medicine as possible, and took particular care to have the directions on each package of food carefully followed. Some foods I found absolutely worthless if not injurious, containing undigested starch and other elements. Others seemed useful in simple malnutrition, but were too laxative and irritating in their action to be safe in intestinal derangements. The food, however, which in any and every case fulfilled all requirements was lactated food. In malnutrition it was 'a complete substitute for mother's milk,' acting in a way which charmed the mother, and was highly appreciated by the physician. In the exhaustion consequent on summer diarrhœa and entero-colitis, its effect was wonderful, filling out the emaciated body and checking the disease with little or no medicine. In cholera infantum, however, it achieved its greatest triumph, holding the disease in check in a grand manner, and finally restoring fully the lost weight and strength."

THERAPEUTICAL NOTES.

The Arsenical Treatment of Malignant Tumors.—F. Köbel, of Tübingen ("Münchener med. Wchnschr."; "Memorabil.," Aug., 1886), has found arsenic useless in epithelial cancers, but of undoubted efficacy in the treatment of a few cases of multiple sarcomata. Out of fifty-nine cases of malignant lymphoma, seventeen were cured (in from one to six months), a partial cure took place in fourteen, while in twenty-eight the treatment was of no avail. The arsenic was given partly by the mouth and partly by subcutaneous injection, and its use was discontinued at the first appearance of toxic symptoms. Abscesses formed at the sites of puncture in thirteen cases, and in two there was a peculiar necrosis of the tissue, with separation of the tumor.

Cocaine in the Treatment of Angina Pectoris.—Laskevitsch, of Charkow ("Rev. de méd."; "Memorabil.," Aug., 1886), has used cocaine hydrochloride in angina pectoris, giving from a third to half a grain three or four times a day, with very satisfactory results. The drug does not cut short the attack, but it diminishes its intensity. Taken at intervals of two or three days, it gradually reduces the severity and the duration of the paroxysms, and finally causes them to disappear. These statements are fortified by four clinical histories. In two cases there was aortic insufficiency with hypertrophy of the left side of the heart and dilatation of the ascending aorta; in the third there was arterial sclerosis; and in the fourth there was mitral insufficiency with slight dilatation of the aorta and generalized arterio-sclerosis. The attacks of angina pectoris disappeared in all of them.

Acorn Cocoa in Infantile Diarrhœa.—Mr. F. W. Elsner ("Australas. Med. Gaz.," June, 1886; "Practitioner," Sept., 1886) speaks very highly of the efficacy of acorn cocoa in all forms of diarrhœa in children. Acorn cocoa is a preparation of ordinary cocoa powdered and freed from fat, to which are added the soluble parts of roasted acorns without cellulose, a little sugar, and roasted flour. A teaspoonful is mixed with cold water, and boiled, being constantly stirred; this may be administered three times a day with a spoon, or placed in the feeding bottle. In twenty-five cases of continuous and exhausting diarrhœa in which he administered this preparation, the benefit was rapid and complete; it never took more than two days to effect an improvement, while twelve days was the limit at which a complete cure occurred.

The Treatment of Typhoid Fever.—In a paper read at the recent meeting of the Association of American Physicians ("New Orleans Med. and Surg. Jour.," Sept., 1886), Dr. F. Peyre Porcher, of Charleston, gave the following formula for a "fever mixture":

Spirit of nitrous ether	½ oz.;
Potassium acetate	1 or 2 drachms;
Potassium chlorate	1 drachm;
Solution of ammonium acetate	1 oz.;
Tincture of aconite	½ drachm;
Camphorated tincture of opium	2 or 3 drachms;
Water	to 4 oz.

A dessertspoonful to be taken every two or three hours as long as there is fever. Potassium bromide or morphine may be added if there is great restlessness or want of sleep.

THE NEW YORK MEDICAL JOURNAL, October 23, 1886.

Lectures and Addresses.

LECTURES ON
THE DIAGNOSIS AND TREATMENT OF DISEASES OF THE CHEST.

DELIVERED BEFORE THE ASCLEPION CLUB,

By BENJAMIN F. WESTBROOK, M. D., Brooklyn,

PHYSICIAN-IN-CHIEF TO THE DEPARTMENT OF THORACIC DISEASES, ST. MARY'S HOSPITAL; PRESIDENT OF THE BROOKLYN PATHOLOGICAL SOCIETY; FELLOW OF THE AMERICAN LARYNGOLOGICAL ASSOCIATION; ETC.

Lecture VI.

Treatment of Diseases of the Heart.

The general treatment of cardiac diseases is divided into the hygienic and the medical. Of these, the hygienic is the more important, as it has for its object the maintenance of approximately perfect health and the prevention or correction of pathological states of the body at large, such as the various cachexiæ and diathetic conditions, upon some of which cardiac lesions are dependent for their origin. The most important of these are the rheumatic and gouty diatheses and the scrofulous cachexia. A predisposition to diseases of the heart exists in many families, and is associated with an inherent tendency to gout and rheumatism. Those who inherit this tendency are never free from danger, and should be warned of the risks of incurring those serious diseases which attend upon any outbreak of their latent maladies. The strumous diathesis, while it does not directly predispose to lesions of the circulatory apparatus, is frequently the indirect cause of them through diseases of the respiratory and digestive apparatus, which are prevalent among those who inherit or acquire it. Those who are constitutionally predisposed to gout or rheumatism should, as far as possible, lead out-of-door lives, or should, at any rate, have sufficient exercise in the open air to allow for full play of the respiratory functions, as it is only in this way that the tendency to imperfect oxidation of nitrogenous elements can be combated. They are to a great extent unsuited for sedentary lives, and for such occupations as involve confinement for many hours a day without sufficient muscular activity. They should carefully avoid the taking of too much food, and particularly such as is not easily digested.

As far as the special food substances are concerned, I believe that the general rule may be laid down that only such substances as agree with the particular person under treatment should be allowed; or conversely, that they need not limit themselves to particular articles of diet, except under the guidance of this rule. I believe that the important question in the dietary of gouty and rheumatic persons is, *What substances are easily digestible by the particular subject of the disease?* The only possible exception to this rule is in the case of the carbo-hydrates, the sugars and starches, and particularly cane-sugar. This seems to be, according to my observation, the most obnoxious of all the food elements, and this view is adopted by Professor Draper, of New York, in his very able article on gout in the "American System of Medicine." I believe that nitrogenous substances—contrary to the opinion of Bence Jones and his followers—are only injurious in so far as they are indigestible. I have frequently seen patients suffering from these diseases improve remarkably upon an almost exclusively nitrogenous diet, the important problem in each case, and the one upon the successful solution of which the well-being of the patient depends, being the selection of such substances as are easily digested. Of course, in the treatment of these, as of other diseased conditions, each case is to be studied on its own merits, and individual peculiarities have always to be taken into consideration.

Some of these persons are injured by the ingestion of too much fatty food, particularly if the fat is in a somewhat indigestible form, as it occurs in pastry, fried meats and vegetables, and other culinary productions. Others, and by far the greater number, are unfavorably affected by sugar. Above all things, malt liquors should be forbidden, and the sweet wines are not to be taken by those who are the subjects of this diathesis. If any stimulants are required, which would scarcely be the case except in sickness, spirits, properly diluted and not sweetened, are the best.

Why the introduction of hydrocarbonaceous substances, or the carbo-hydrates, should result in the formation of nitrogenous compounds of an inferior degree of oxidation in the body is a question which no one at present is able to answer. The theory which ascribes the presence of these bodies to certain definite series of reactions upon the albuminoid substances of food can, we believe, no longer be maintained, though its beautiful simplicity won to it many adherents when it was first enunciated.

Those who are inclined to rheumatism or who have already suffered from an attack, so that the presence of the predisposition is well ascertained, should be particularly cautioned against exposure to cold and wet, for we know that many, perhaps the majority, of acute rheumatic attacks are directly excited by catching cold, though, of course, simple exposure would be insufficient were not the conditions ripe for the outbreak of the disease.

The treatment of the strumous diathesis involves more particular attention to the hygiene of the patient than either of the other two already mentioned. The treatment should always be begun, if possible, in childhood, as it is at that time, when the body is rapidly developing and assuming the features which it will maintain during the entire life of the individual, that favorable or unfavorable impressions are most easily made, and inherent peculiarities most readily counteracted by judicious measures. Such children should be kept out of doors as much as possible, and when it is necessary for them to be in the house, either at night or in bad weather, great care should be exercised that the rooms which they inhabit are thoroughly ventilated. They should be clothed in such a manner that a sudden chilling of the surface is not likely to occur; it is, however, unwise to dress them too warmly, because the constant perspiration resulting from this is an ever-present source of danger; besides the debility which it induces, the skin becomes tender and is easily affected by exposure to cold or wet.

They should be warmly but lightly clad. At the same time they should be, as far as practicable, accustomed to a moderate amount of exposure, either by allowing them to remain for a short time every day exposed to the air in a room that is not too cold, or by cold bathing, though great care should be used in bathing that the water be not too cold, which would produce a chill that could only be productive of bad results. Their diet should consist largely of animal substances and of such vegetables as are not too rich in starch. Of all the elements of food, starch is the least beneficial to a strumous subject, and, of all the starches, that of the potato is the worst. In those countries where farinaceous foods are almost exclusively used, the scrofulous affections are extremely prevalent. This is seen among the Scotch and Irish races, and generally among the lower classes upon the continent of Europe.

Where cardiac disease already exists, the treatment should be directed not only to the immediate anatomical lesion, but to the general condition of the organism; and also to any special affections of other organs than those concerned in the circulatory functions. The general treatment may be said to be more important than the local; that is, it is more necessary to attend to the nutrition of the patient, to the combating of any constitutional disease which already exists, or any morbid tendency which may be operative upon the body, than to simply correct some local mechanical disturbance.

It is an interesting clinical observation, and one which must be familiar to every one who has had actual experience in the treatment of this class of diseases, that a heart which is at one time incapable of performing its function, owing, apparently, to some mechanical disturbance at the valves or orifices, may subsequently so far improve in its action that scarcely any important disturbance of the circulation can be found. The reason of this is twofold: in the first place, the organ itself may at times be overworked and exhausted, or the local conditions, particularly in the pulmonary system, be deranged, either from fatigue, exposure, or some other debilitating influence affecting the vaso-motor apparatus of the lungs; or, in the second place, general constitutional conditions or diseases of distinct organs, such as the digestive apparatus, the cerebro-spinal nervous system, or pathological states of the blood, may so affect the nutrition of the body at large, and the heart in particular, that it is, for the time being, incapable of performing its function perfectly, embarrassed as it is by some mechanical deficiency.

These general causes, as we have already said, are frequently very important, and should be observed and treated with the greatest care. As Dr. Stokes has sagely remarked, "In medicine we have to deal with ever varying phenomena. The vital conditions of organs can not always be inferred from their physical state, nor the influences which act on the entire economy be explained by anatomy." By the term "vital condition" is here meant the condition of nutrition or innervation; that is, that condition of an organ which depends upon its relations to the other portions of the body.

The majority of cases of heart disease that we are called upon to treat are of rheumatic origin, and the first and most important therapeutic indication in such cases is to combat the prevailing diathesis. This is of importance, not only as regards the immediate improvement which we may expect to obtain from our treatment, but as a prophylactic measure—a means, that is, of checking the extension of the disease and preventing relapse. As was remarked in the lecture upon the "Diagnosis and Prognosis of Valvular Diseases," it is of the greatest importance, in cases of rheumatic origin, to prevent a return of the rheumatism, as any attack, however slight, is as likely to affect the endocardium as any other serous membrane; and, with each renewed inflammatory irritation, the mechanical impediment of the circulation will be increased. When the rheumatic diathesis is to be combated, the most important measure is the regulation of the diet. It is not necessary to repeat what has already been said upon this subject, but I would like to insist once more upon the importance of considering the peculiarities of each individual case and selecting such a diet as can be easily and quickly digested, and to call particular attention to the noxious effects of cane-sugar.

In addition to the regulation of the diet, we should also treat the gastric or gastro-intestinal catarrh with which these subjects are almost invariably affected. If, at the time the case is seen, the digestion is good and no evidences of irritation of the stomach or bowels are present, after giving the patient advice in regard to the food which he should take, it is our duty to warn him particularly that, upon the occurrence of any indigestion, recourse should at once be had to remedies suitable for its removal. When the digestive disturbance is not severe, if the tongue is not very red or heavily coated, and no marked acidity of the stomach is present, the most reliable agents for its treatment are the mineral acids, and the one most commonly employed and apparently the most frequently beneficial is the dilute hydrochloric acid, given after meals and freely diluted with water. The administration of small doses of nux vomica in combination with it will many times be of service. If the tongue is pallid and there is a copious secretion of mucus, the dilute nitric acid may be better, or it may be better even to employ some slight vegetable astringent, such as the infusion of *Prunus virginiana.* If, on the other hand, the tongue is very red, if the fauces and pharynx are in a state of catarrhal inflammation, as is not infrequently the case, and if some tenderness is felt in the epigastrium after taking food or drinking cold fluids, it is better, temporarily at least, to employ a more sedative remedy and to replace the acid by an alkali. The exhibition of a saline mineral-water in the morning, particularly one containing the sodium salts, has a marked effect in reducing the irritation of the mucous membrane of the digestive tract; and these waters frequently act better when taken warm. The alkaline and sedative preparations are best administered immediately or within a short time after the taking of food, except in some cases where the catarrh is very well marked, when a powder of bismuth or the oxalate of cerium with the bicarbonate of sodium and a small dose of some mild opiate, preferably codeine, may be given just before the meal. In some instances, which must be determined by the careful observation of the practitioner, it is well to give such a sedative powder directly before eating, and a mineral acid a short time after; and, in others, to follow the meal by a decided alkali. It is impossible to give definite rules for the application of these various methods of treatment. They must be selected by the practitioner after careful study of individual cases. If the subject is anæmic, tincture of chloride of iron is of great value, and we may give with it a few drops of dilute hydrochloric acid and glycerin. The addition of the latter is of service, not only to lessen the irritating effects of the iron upon the stomach and for its own action upon the gastric mucous membrane, but also to prevent the constipating effect of the iron. Pepsin may be used as a palliative, and while we are waiting for other remedies to act, but I think that this agent is of very little use as a means of cure. The best way to secure proper digestion of the food which is introduced into the alimentary canal is to put the glands into such a condition as to secrete normal digestive fluids, and this pepsin will not do. The most that can be expected of it is to aid in securing a more complete digestion, where the process is imperfect, and prevent the production of irritating substances whose presence will excite or keep alive a gastro-intestinal catarrh.

In those who are subject to periodical attacks of indigestion, or biliousness as it is sometimes termed, the treatment will be more promptly successful if it is inaugurated by the administration of the so-called cholagogues. The best of these is the mild chloride of mercury, but, if there is any objection to this or to its frequent repetition, some of the vegetable cholagogues may be substituted for it. We may use podophyllin, euonymin, or iridin with taraxacum, jalap, or some of the other vegetable cathartics.

If the rheumatic condition is persistent and assumes the subacute or chronic form, it is best combated by a very careful regulation of the diet, suitable exercise and clothing, and the very free exhibition of mineral acids. If this treatment is unavailing, the salicylate of sodium may be given in moderate doses alternately with some properly selected tonic; and, if this should fail, the lithium salts may be employed. The salicylate of lithium, as has been recently observed by Professor Dujardin-Beaumetz, is efficacious in the declining stages of acute or subacute rheumatic attacks, when the salicylates or alkalies have begun to lose their effect, and the disease tends to become chronic. In one or two instances in which I have employed it for this purpose it has been eminently successful. Like the salicylate of sodium or potassium, in order to obtain the best results, we must administer it in large and frequently repeated doses. If these means prove unavailing, recourse must be had to a change of climate and the systematic *régime* of some water-cure. Unfortunately, however, there are very few health-resorts in the United States where anything like an intelligent systematic treatment of the patient is to be obtained.

With the treatment of acute rheumatic fever I have not time to deal; I will, however, mention one precaution which ought always to be taken in treating this disease, but which is frequently neglected through carelessness or haste upon the part of the practitioner, and that is, at the commencement of an attack of acute rheumatism, or at least as soon as we are called upon to see the patient, to examine the heart as a matter of routine, in order that we may know the condition of the organ up to that time. It frequently occurs, particularly in hospital practice, where the patients are not seen until the disease has been in progress a week or more, that on our first examination some abnormal cardiac sounds are heard, and we are unable to see to what extent they are due to the attack with which we are dealing, or how much disease may have existed before its occurrence. In private practice, where we are generally called to see the patient early in the acute disease, we need not be thus embarrassed, if we take the precaution always to examine the heart at our first visit. Of course, if the heart has been normal previously, there is very little difficulty in diagnosticating a recent endocarditis, even if the patient is not seen until the disease has been running for one or two weeks; because, if the disease were of more ancient origin, it would have given rise to hypertrophy or dilatation of the heart, and, if the size of the organ is not increased, or is only slightly larger than in health, we may assume either that the murmurs heard are caused by a fresh endocardial inflammation, or, if they existed before, the lesions must have been very slight and innocuous. We should not, however, lose sight of the fact, in making these examinations, that a functional bruit is very often heard in the course of an attack of acute rheumatism, and that it will entirely disappear with the return of health. The functional bruit is almost, if not quite, invariably audible at the left side of the sternum, but seldom, if ever, in the aortic region. It is not loud or harsh—never, I think, so intense as the functional murmur of anæmia or chlorosis; and, in case it is heard over the apex, it is not transmitted toward the axillary region. Functional murmurs of anæmic origin are sometimes audible over the entire chest, though rarely, but I have never met with a case of rheumatism in which the functional murmur was very loud or very widely diffused.

There is one other observation to be made in regard to the treatment of acute rheumatism—namely, that if we desire to avoid the occurrence of valvular lesion, we should endeavor to break up the attack as speedily as possible. With the means now at our command—the alkaline treatment, when thoroughly and systematically carried out, and the salicylates—the great majority of cases may be very promptly controlled; but much will depend, particularly in the treatment of the declining stages, upon the judgment of the practitioner in regard to each individual case.

The treatment of the gouty diathesis, as far as it is related to the cardiac lesion, is of less importance than that of the rheumatic. The diseases associated with it are more slowly developed, take a longer course, and shorten the lives of the patient less than those consequent upon the rheumatic diseases; but it is important to recognize the existence of this diathesis, because of its insidious nature, and of the very fact that, if it is not recognized and counteracted as far as possible, it may, before it is checked, work incurable mischief, not only to the heart, but also to other important organs. Another reason why the practitioner should always bear in mind the relationship between gout and cardiac disease is that we encounter, in association with these conditions, important and destructive lesions of the kidneys—lesions which are so insidious in their progress that they are frequently not detected until the fatal event is at hand.

Where cardiac disease is found, without a previous history of rheumatism, if it is either a simple hypertrophy or hypertrophy with valvular lesions, especially at the aortic orifice, chronic nephritis should always be suspected, and the possibility of its association with the gouty diathesis always considered. It is common, at least in this country, to find a condition which is, as it were, midway between chronic gout and chronic rheumatism. There are subjects who are alternately attacked with gout and rhematism, though the gout does not usually assume its typical form. There seems to be a borderland between the two diseases where one merges into the other. This has been very clearly pointed out by Professor Draper, of New York.

In those cases in which the condition known as rheumatic gout is found, the treatment is sometimes very difficult. The combination of the potassium salts with colchicum is often efficacious, and I have of late, in one instance, obtained most rapid and marked relief from the use of the salicylate of lithium.

The strumous diathesis is probably never the direct cause of valvular disease of the heart, but through the occurrence of bronchitis and emphysema, which may, and often do, indirectly lead to hypertrophy and dilatation of the right heart. It may, indeed, by its interference with primary assimilation, be the remote cause of rheumatic attacks. It is not an uncommon occurrence to see patients with chronic, non-specific pulmonary affections — such as chronic bronchitis, emphysema, and pulmonary fibrosis—develop a rheumatic tendency, and even have attacks of acute articular rheumatism, apparently as a result either of the diminished respiration or of the passive hyperæmia of the liver or other portions of the chylopoietic system. Such cases may, as a tertiary manifestation, exhibit a cardiac lesion.

This curious pathological series was illustrated by a case which came under my observation in 1885. The patient was a young married lady who, after the birth of her first child, had a suppurative pelvic inflammation resulting in the formation of one or more large abscesses. After the evacuation of the pus she continued to suffer from pyæmic symptoms, and finally an acute pleuro-pneumonia occurred, probably of metastatic origin. The course of the disease was very slow and tedious, but, after the hectic fever had continued for some months, it finally subsided, leaving the lung in a condition typical of fibroid phthisis with bronchiectatic cavities. Almost the entire lung was involved in the disease and remained permanently useless for respiratory purposes. While the healing process was going on, but before the fever had entirely subsided, say five months from the commencement of the disease and while resident in the Bermuda Islands, she had an attack of acute rheumatism involving several of the larger articulations. The disease has recurred at intervals, though with decreasing frequency and severity. In the early part of the summer of 1885 the chest was examined and no evidence of cardiac disease detected, but during the summer, while she was in the country, there was a mild attack of rheumatism accompanied by slight fever and swelling of the joints, and, on her return to the city in October, I found that there was a regurgitation at the mitral orifice.

There is no history of rheumatism in the family, nor had the patient ever exhibited the slightest evidences of it before her confinement.

Other cases of a similar character have come under my notice, and, I suppose, have been observed by every practitioner. It is important to notice them for the sake of calling attention to the close relationship between different morbid processes, and to point out the necessity for early treatment in all diathetic conditions, not only for the purpose of removing any immediate symptoms, but also to prevent disastrous consequences in the future.

(To be concluded.)

Original Communications.

THE QUESTION OF HÆMORRHAGE FOLLOWING UVULOTOMY.

Report of Twenty-three Cases of Obstinate Uvular Hæmorrhage; Description of a Uvular Clamp; Bibliography.

By ETHELBERT CARROLL MORGAN, A. B., M. D.,
WASHINGTON, D. C.

(Concluded from page 425.)

Having described the clinical histories of these unusual cases, I desire to bring to your notice the results of my literary research regarding the question of hæmorrhage following uvulotomy. With a view of making the present paper exhaustive, I addressed six hundred copies of the following letter to the laryngologists of the world, as well as to the more prominent surgeons and practitioners of medicine in this country, asking their experience in the matter of hæmorrhage after uvulotomy.

918 E Street, Northwest, Washington, D. C., *April 1, 1886.*

My dear Doctor: I have been recently investigating the subject of obstinate hæmorrhage following uvulotomy. My purpose is to collect the interesting *unrecorded* and *recorded* examples of this rare accident and to publish them in the form of a monograph. In case you have met with such hæmorrhage, may I ask you to aid me in this undertaking by answering and returning the accompanying questions to my address? Brief details of cases of hæmorrhage following uvulotomy occurring in your own practice or the practice of others, as well as any references to medical literature, will be greatly appreciated by

Yours respectfully,
E. Carroll Morgan, M. D.,
Fellow of the American Laryngological Association, Professor of Laryngology, Med. Dept., University of Georgetown, Washington, D. C.

1. State age, sex of patient, etc. 2. For what reason was uvulotomy performed? 3. Was the bleeding primary or secondary? 4. What was the duration and extent of the bleeding? 5. How was the bleeding finally controlled? 6. Was

there an assignable cause for the bleeding? 7. What instrument was employed in operating?

The prevailing opinions of these gentlemen are reflected in my essay to-day, and I take this opportunity to express appreciation of their prompt response to my call for information. The widely scattered examples of uvular hæmorrhage have, for the first time in the history of medicine, been collected and added to the unrecorded cases, which I secured by the above-mentioned letter.

I wish at this point to state emphatically that my present investigation was not inspired by any desire to play the rôle of alarmist regarding uvular hæmorrhage, but, on the contrary, to present the subject in its true light, and to record the numerous examples of this rare accident hitherto ignored.

Those who would exsect, as also those who would not even clip, a uvula may find little comfort in my studies; for the conclusions therefrom do not lead me to espouse the opinions of either class of extremists.

Death has resulted from bleeding after excision of the uvula in one instance,[*] and the bleeding in Zambaco's[†] patient probably hastened the fatal termination of a chronic disease. It appears from the Hippocratic[‡] and other[#] treatises that excision of the uvula was occasionally performed in early times. There is, according to my reading and interpretation, evidence to prove that Hippocrates[‖] was at one time in the habit of amputating uvulæ by means of his finger-nails, although he also employed cutting instruments. Celsus[△] seized as much of the organ as he deemed it advisable to retain with a pair of forceps, and cut below the instrument. Fabricius ab Aquapendente[◊] excised with scissors only, and applied a heated (not incandescent) spoon to the bleeding stump. No obstinate hæmorrhage is mentioned by these authors. Albucasis,[↕] Avicenna,[↕] and Oribasius,[↕] also Aetius,[↕] removed the uvula by cutting instruments. Some of the older surgeons surrounded their operations upon the uvula with great ceremony, and a regard for details quite praiseworthy. Paulus Ægineta,[↕] for example, was accustomed to employ instruments expressly made for this operation: a staphylagrum to hold the uvula, a staphylatome to divide it, and a staphylacaustum to cauterize the wound. Galen,[⹋] Mesué,[**] Nuck,[**] and Boss[**] seem to have belonged chiefly to the expectant school, ignoring surgical procedures in treating elongated uvulæ, the three latter advising traction upon the hair of the head to such a degree as to tear the skin from the cranium. This traction was accomplished by tying the hair up in a ribbon near its roots, and twisting until a top-knot was formed. It may not be generally known that, even to this day, the southern negroes resort to the above-described method with implicit faith in its never-failing power to raise the palate. I find that Mesué[*] also directs the operation to be performed with a heated scalpel of gold. During the reigns of Antonius and Serverus, Aphrodesia violated the public confidence and made himself famous by seeking to inspire the fear that those persons who suffered excision of the uvula at its base would always die of consumption.[†] Cauterization[‡] is first mentioned by Demosthenes, of Massilia. The Arabians[#] destroyed uvulæ by caustic and by the red-hot iron. Paré[‖] used the ligature, and the two Fabricii,[△] at various periods, scissors, caustic, and ligature.

M. Tholozan,[◊] in a note upon excision of the uvula by Persian barbers, says:

> "In the districts of Semnan and Fironz-Kouh, situated five days' march to the east of Teheran, excision of the uvula is practiced by the Persian barbers on nearly all the children, as a prophylaxis of inflammation of the throat. They use a strong wooden spatula and a thick steel rod, whose sharp end is curved on the flat or shaped sometimes as a complete ring, seven to eight mm. in diameter. They are so constructed as not to endanger neighboring parts. The barber passes the spatula rapidly into the throat and presses it from behind forward against the uvula. He then applies the cutting instrument to the concavity of the uvula produced by the pressure of the spatula. The uvula is then cut by pressure combined with lateral movements. The piece cut off is withdrawn by the two instruments held in juxtaposition. They practice this operation very dexterously, charging for it a few centimes. Women practice it also in the harem. The practice dates back many generations. It is usually done at the age of one, two, or three years. In addition to preserving them, as they suppose, from danger of frequent and severe sore throats, they think the danger of suffocation is lessened. No accident seems to occur in connection with this operation. The practice is confined to the districts mentioned; inflammation and catarrh of the throat are very frequent here."
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> "The cutting of the uvula has been customary in the northern provinces of Iceland,[‡] if not over the whole country, from the earliest times. The operation, as a rule, is performed during childhood; if not then, later in life. The operation is performed partly because it is supposed to be able to prevent diseases of the throat, and partly because there is a great deal of superstition connected with the results of the operation—for example, in preventing sickness and general indisposition. A merchant from Iceland has told me that he knew a child of seven or eight years, who was very small, and its slow growth was supposed to be caused by the fact of its uvula not having been removed at an early age; the operation was performed in the hope that the child would thrive better in consequence. The same gentleman says he knows that the uvula has been cut in grown-up persons after angina to prevent relapse, but never during the disease. He never heard of any case where an unfortunate result such as hæmorrhage followed the operation. I myself have seen two vela whose uvulæ had been cut away,

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[*] Read Meyer's report, cited above, which I have verified.

[†] *Op. cit.*

[‡] "Prognost. de morbis," ii, De affect.

[#] Aretæus, Περὶ ἀιτὶων καὶ σημεῖων, κ.τ.λ., fol., Lugd. Bat., 1735, cap. viii, p. 7.

[‖] Lisfranc, "Revue méd.," Paris, 1823, vol. xi, p. 241.

[△] *Op. cit.*, vii, 12.

[◊] *Op. cit.*

[↕] Chelius's "Surgery," translation by South, Philadelphia, 1847, i, p. 167.

[↕] Velpeau, "Operative Surgery," iii, New York, 1847, p. 385.

[⹋] "De med. sec. loc.," vi.

[**] Velpeau, "Operative Surgery," New York, 1847, iii, p. 385.

[*] De ægr. gutturis, 3.

[†] "Revue méd. franç. et étrang.," Paris, 1823, xi, p. 241.

[‡] Chelius, *op. cit.*, p. 167.

[#] *Op. cit.*

[‖] *Op. cit.*

[△] *Op. cit.*

[◊] "Bull. de l'Acad. de méd.," 1884, p. 8.

[‡] Letter from Dr. Wilhelm Meyer, of Copenhagen, to Dr. William H. Daly, of Pittsburgh.

from Ofiord and Husavih, in the north part of Iceland. In both cases the uvula was cut out at the root, and in both it was done in early age (from one to two years), the usual age at which the operation is performed.

"The operation, which is thought as necessary as vaccination, is performed by peasants who are accustomed to do it, and of whom there are one or more in each parish. They do it with an instrument which is a little like Morell Mackenzie's tonsillotome, and the instrument is called Ufvrskaeri and made with great skill by the smiths. The operation is said to have been performed less frequently during the last few years."

Conditions which may or may not influence the occurrence of hæmorrhage after uvulotomy:

"*Anomalous Blood-supply.*"—The existence of an anomalous arterial or venous distribution to the velum palati and uvula has never been appreciated as a probable cause of copious hæmorrhage following uvulotomy. In my judgment, several of the cases cited to-day point clearly to a larger artery than commonly supplies the uvula being the source of the bleeding. The vascular supply of the uvula remains even to-day somewhat in a cloudy condition, little that is definite being accessible upon the subject. A necropsy alone can of course decide the existence or non-existence of supernumerary arteries.

Dr. J. W. Farlow,[*] of Boston, says, in reference to this question of anomalous pharyngeal blood-supply, that he has lately seen three cases in which there were large, pulsating arteries to be seen on the back of the pharynx.

"One girl, aged sixteen, had a very large artery on the left side and a less marked one on the right side of the pharynx about a quarter of an inch inside of the posterior pillar of the fauces."

This case he showed at a medical meeting, and Dr. F. I. Knight and Dr. De Blois have seen it:

"Another case was a girl of twenty-three, only in her the artery was on the right side alone.

"The last case was a woman of twenty-six and was similar to the first, the arteries in both instances being apparently larger than the radial.

"Dr. Thomas Dwight, professor of anatomy in the Harvard Medical School, says that these cases are probably abnormalities of the ascending pharyngeal artery."

Instruments Employed.—Excluding the snare,[†] the galvano-cautery,[‡] and the ligature,[#] and surely these methods are not generally selected in uvular excisions, hæmorrhage results equally from the use of various instruments. The instruments employed in operating on the cases of hæmorrhage reported to-day were the scissors, the bistoury, or the uvulatome; and simply because ninety-nine out of every hundred patients are operated on with the scissors, the bistoury, or the uvulatome. My investigation convinces me that the particular instrument used (with the exceptions noted) is of no importance, so far as bleeding is concerned, for the Persian barbers,[||] with their crude method in their thousands of operations, have never encountered trouble.

Pathological Condition of the Uvula.—Excessive hypertrophy, or the development of a varicose or "hæmorrhoidal state" of the veins of the organ, assuredly tends to increase the loss of blood following uvulotomy. Most of the cases cited in my paper were instances of uvular hypertrophy, in a few the organ being of enormous dimensions. Operations performed during the existence of acute inflammation, œdema, or ulceration, are more likely to be succeeded by bleeding than operations made for a simple prolapsus. The instances of so-called spontaneous uvular bleeding reported by René Vanoye,[*] Rudolph,[†] and Würzburger[‡] do not fall within the scope of my studies.

Character of the Bleeding.—After uvulotomy, the bleeding, if persistent, is nearly always arterial, as is evidenced by the color of the blood, the spurting of arteries, or the pulsation of the uvular stump. Venous hæmorrhage is, nevertheless, occasionally noticed.

Supposed Risk of Hæmorrhage in High Operations.—Troublesome bleeding is not necessarily attributable to the removal of too much of the uvula (in prolapsus), for a simple clipping has caused profuse hæmorrhage, while an extirpation was nearly bloodless. I should hesitate to apply this opinion to cases of indurated or hypertrophied uvulæ. My practice is to so operate on a prolapsed or hypertrophied uvula as to restore it as near as possible to its normal proportions. Between the two extremes of complete exsection of the uvula and the let-alone system, I think a middle course exists, and can be pursued with the happiest results. No simple operative procedure is more frequently beneficial than a uvulotomy properly done in proper cases.

Hæmorrhagic Diathesis.—The existence of hæmatophilia would have its influence in rendering bleeding persistent in uvulotomy as in other surgical procedures. It is worthy of special note, however, that in none of my collected cases was there a hæmorrhagic diathesis clearly established.

Final Conclusions.—A fatal or uncontrollable hæmorrhage has in one instance followed a uvulotomy.[#]

A persistent, obstinate, or alarming hæmorrhage is only encountered in the rarest instances.

A moderate bleeding, ceasing spontaneously or by the use of mild styptics, occasionally happens.

The loss of a few drops of blood at the time of operating, followed by slight oozing, is of common occurrence.

The most reliable surgical methods for controlling uvular hæmorrhage are the ligature, compression by the clamp or forceps, or the use of the galvano or actual cautery.

The most reliable styptics are, in the order named, solid silver nitrate, or iron persulphate directly applied to the bleeding stump, and solutions of gallo-tannic acid, or alum. To these may be added the local use of ice, ice-water, and vinegar.

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[*] Personal communication to the writer.

[†] Morgan (E. C.), "The Value of the Snare in performing Uvulotomy," "Maryland M. J.," Balt., September 26, 1885.

[‡] Letter from Mr. Lennox Browne, London.

[#] Waters, "System of Surgery," Philadelphia, 1802, p. 317.

[||] Tholozan Bull. de l'Acad. de méd.," 1884, p. 8.

[*] "Ann. de la Soc. méd. d'émulation de la Flandre occident.," 1848, p. 250.

[†] Rust's "Magazin," 1823, xiii, p. 276.

[‡] "Krankheiten der Uvula," Erlangen, 1843, p. 15.

[#] Read Meyer's extract from the "Knytlingasaga," chap. xvi, 1828, p. 200, given above. Since reading this essay to the American Laryngological Association, I have been convinced by research that the case referred to in Dr. Meyer's letter is authentic. I therefore admit the case to my paper.

The most reliable systemic means are opium, lead acetate, sulphuric acid, and ergot.

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It now becomes my pleasant duty to acknowledge the substantial assistance and advice extended to me during the preparation of this paper by Dr. J. S. Billings, Dr. Robert Fletcher, Dr. Thomas Wise, Dr. J. C. McConnell, Dr. D. S. Lamb, and Professor Apel, of the Surgeon-General's Office, Washington.

COCAINE IN WHOOPING-COUGH:

IS ITS USE SAFE IN YOUNG CHILDREN?[*]

By L. EMMETT HOLT, A. M., M. D.,

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I desire to place the following cases on record, that they may serve as a warning to any who may be led to try the method of treatment from the high authority on which it is recommended. They show that, at least in young children, it is to be used with very great caution.

This application of cocaine was first published, I believe, by Moncorvo, who, as a preliminary step to the local use of resorcin, advised the throat to be swabbed with a ten-per-cent. solution.[†]

Barlow[‡] mentions a private communication from the same authority in which a spray of the same strength is advised.

Guelmi[#] has recommended for the same purpose the use of a twenty-per-cent. solution of cocaine.

Prior[‖] has reported in detail several cases treated by the use of a ten-per-cent. solution, painted first on the pharynx, and afterward on the larynx, with good results. He used inhalations of a twenty-per-cent. solution, four times a day, in a child six years old, but preferred the other method of application, since the attenuation of the spray made it less effective.

Michael[△] mentions cocaine as of some value, but does not state the strength of the solution used.

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[*] Read before the New York Clinical Society, September 24, 1886.

[†] "N. Y. Med. Jour.," October 17, 1885.

[‡] "Lancet," 1886, i, 915.

[#] "Lond. Med. Record," July 15, 1886, from "Gazzetta degli ospitali," No. 19, 1886.

[‖] "Berl. klin. Woch.," 1885, No. 45.

[△] "Deutsch. med. Wochenschrift," 1886, xii, 74.

Schech* recommends one-third to one-per-cent. solutions as of undoubted value.

Pott† reports that he has obtained astonishing benefit from painting the pharynx with a five-per-cent. solution of cocaine. He lost two patients, young infants, while under this treatment; both deaths were attributed to pneumonia. He states expressly that this solution can be used without the slightest fear in infants, even as young as six months.

By no one of these writers is the slightest reference made to dangerous or even unpleasant symptoms from cocaine.

Encouraged by these favorable reports, I determined to give the method a trial. Theoretically, what could be better than to allay reflex irritability by producing anæsthesia of the larynx and pharynx, and then apply the local antiseptic to combat the disease germs? An opportunity was soon offered in an epidemic of whooping-cough in the New York Infant Asylum.

Accordingly, on August 24th, five children, of ages ranging from three months to two years, were directed to be swabbed with a four-per-cent. solution of hydrochloride of cocaine every two hours during the day, four minutes before the application of the two-per-cent. solution of resorcin in the same manner.

Nothing unusual was noticed except in one case, that of a delicate infant who was reported as being very restless after the swabbing, and once "had something like a spasm."

When the resident physician, who was summoned, arrived, however, nothing more than great restlessness and peculiar movements of the mouth and tongue were seen, probably from the anæsthesia.

In the four remaining cases the cocaine swabbing was replaced on September 3d by a spray of a solution of the same strength.

After the second spraying, in Case II, P. R., an infant of three months, manifested great restlessness, which shortly passed into general convulsive movements. The temperature rose to 104·5°, and the child was in a very critical condition during the greater part of the day. Under the use of enemata of bromide and chloral, mustard baths, and antipyrine, the serious symptoms passed away in about nine hours. The cocaine was discontinued.

Case III.—E. B., six months old, delicate, on the same day and about the same length of time after the second use of the spray, manifested similar symptoms to those first mentioned, but of less severity, and they passed away in a few hours, the cocaine being stopped.

Case IV.—M. C., a stout, well-nourished child of eight months, received the spray in the same manner as in the two recorded cases, but manifested no unusual symptoms until September 10th, after a week's use. On that date a fresh solution of cocaine was prepared, and, about half an hour after the third spraying, marked restlessness and fretfulness were noticed. The child began vomiting, which was repeated several times during the afternoon and evening. The temperature rose to 102°. These symptoms subsided without special treatment, and the child rested well during the night. The next morning there was a little diarrhœa, but otherwise the patient was as well as usual. As I was not quite satisfied that the symptoms in this case were due to cocaine, its use was begun again, after two days' interval, on September 13th. Shortly after the second spraying it became quite restless, but the cocaine was used, notwithstanding, a third time at 3 P. M. The restlessness and disturbance continued to increase through the afternoon, and Dr. Coggeshall made the following observations at 7 P. M.: Hands and feet thrown about in constant motion; mouth moving all the time as if dry; pupils dilated and do not respond to light; pulse rapid. Patient was given chloral, gr. v, by enema, and fell asleep in half an hour. Awoke in an hour and a half with same movements, though less in degree. Temperature normal, pulse 140, respiration rapid and shallow, vomited once.

The child slept well during the remainder of the night and awoke the next morning as well as usual. The pupils were slightly dilated, but no other effects were observed. The cocaine was stopped after the third application.

Case V.—A. M., aged twenty-one months, in good condition, nervous temperament. On the same day as the symptoms in the preceding case the spray of the same strength was begun, to be used four times a day. Four applications made. Child was remarked to be unusually gay and happy during the day, but nothing else noticed until, about half an hour after the fourth spraying, active delirium developed, and Dr. Coggeshall, the resident physician, saw him, and made the following observations:

Marked delirium, talking constantly but disconnectedly; seemed affected with illusions rather pleasant than otherwise; at times, however, screaming as if from fright; constant movements of hands and feet of an irregular character, picking at bedclothes, stuffing hands into mouth, etc.; mouth moved about peculiarly; face slightly flushed; forehead covered with perspiration; pupils widely dilated and not responding to light; radial pulse too rapid to be counted; respiration rapid; temperature normal; no vomiting. The urine in this as well as in all the other cases was passed freely. The treatment adopted in the preceding case, chloral by enema, was repeated here. By 11 P. M. the symptoms had in great measure subsided, and the child passed a fair night. The next morning the dilatation of the pupils remained, but, beyond a little more fretfulness than usual, nothing remained of the symptoms.

To summarize, then: One child of about four months had well-marked symptoms from swabbing with a four-per-cent. solution.

Two children, aged respectively three and six months, developed alarming symptoms from a four-per-cent. spray used twice.

A child, aged eight months, used this solution without exhibiting notable constitutional symptoms for one week, but showed them almost immediately on beginning with a freshly made solution.

A child, aged twenty-one months, had only the last-mentioned solution used, and displayed symptoms of poisoning from the beginning.

The spray was substituted for the swab, as the latter was troublesome in its application, frequently excited vomiting, and failed to produce noteworthy benefit. The spray was administered by means of a two-bulbed hand instrument, in which a tongue depressor was combined with the nozzle, so that it could be carried well back into the throat before delivering the spray. It was used by an experienced nurse, to whom no more specific directions had been given than that she was to use it for a moment, and then wait four minutes before applying the resorcin.

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* "Der Fortschritt," May 20, 1886.

† "Jahrb. f. Kinderheilkunde," 1886, Bd. xxiv, H. 1.

I must confess to some surprise, when some experiments were made in regard to the amount of the solution used at each application, to find that it was probably not far from twenty-five minims. This was arrived at by measuring the quantity in the bottle before and after the spray had been used once in the usual manner. It is likely, however, that a considerable part of this was frequently lost from the gagging and spitting of the children.

In beginning with a four-per-cent. solution, where others had advised the use of ten- and even twenty-per-cent. solutions, I thought I was within safe limits. I congratulate myself that no more serious results followed. It is hard to believe that those who have advised the use of strong solutions have had much experience in their use.

The production of constitutional symptoms from cocaine, when applied to mucous membranes, is much more common, I think, than is generally supposed.

A number of other patients on whom cocaine had been used for various purposes at the asylum, it was remembered, had presented peculiar symptoms, for which no explanation at the time was evident. Looking at these in the light of the cases here recorded, they were evidently due to mild cocaine poisoning. This was notably the case with some cases of dysentery where ten minims, and half an hour later fifteen minims more, of a four-per-cent. solution were used *per rectum* to relieve distressing tenesmus. The ages were from six to eighteen months, and no beneficial results were seen.

In conclusion, I wish to emphasize the following points:

1. Cocaine must be used with great caution in young children under all circumstances.

2. The spray is never to be recommended, since an uncertain quantity is given.

3. Solutions stronger than four per cent. should not be used by swab or pencil in children under two years, and in older ones only with great caution. The same remark applies to the rectum as well as the throat.

4. In the cases where it was tried I failed to see any notable benefit in the disease.

5. Chloral seemed to be of very decided value in controlling symptoms due to cocaine. I would suggest a more extended trial of it in this direction.

I desire to express my indebtedness to Dr. Mary L. Farnum, assistant physician to the asylum, for the notes in the above-mentioned cases.

15 East Fifty-fourth Street.

SIX CONSECUTIVE CASES OF ABDOMINAL SECTION FOR PYOSALPINX

In which a History of Gonorrhœa was clearly present.[*]

By JOSEPH PRICE, M. D.,
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The five following cases are interesting as showing beyond doubt the causal relation existing between diseased condition of the tubes and ovaries and a previous gonorrhœal infection:

Case I. — Mrs. M., aged twenty-nine, twice married, enjoyed good health during her first marriage and bore two healthy children, the last seven years ago. Her ill health and suffering dated from her second marriage, soon after which she applied for treatment, complaining of chills, fever, sharp and agonizing pain in the region of the ovaries, painful coition, rectal and vesical disturbance, painful and difficult locomotion. Turning over in bed or stepping from a curb gave her agonizing pain. She was weak and unable to work, suffered from constipation, and was losing flesh rapidly. There was also insomnia.

Examination.—Perinæum and cervix deeply torn; right ovary enlarged; tube distended and tortuous; left ovary and tube large, distended, tortuous, and firmly adherent; uterus forward and in good position; well-marked sulcus between the appendages and uterus. Upon further questioning, she stated that soon after marriage the second time active inflammatory trouble developed with profuse purulent discharge. The husband was interrogated, and he admitted the presence of an occasional gleet. I urged the removal of the diseased appendages. Operation December 12, 1885.

Large adherent ovaries and tubes filled with pus were with great difficulty removed. Tubes were markedly distended and cheesy. They tore and cut readily under the ligature first applied near the cornua. This rendered the application of the cautery necessary. The left tube and ovary were attached to the left side of the uterus and the sigmoid flexure of the colon. During enucleation a free discharge of pus and cheesy matter took place through the uterus into the vagina. She made a speedy recovery without a bad symptom, pulse and temperature never going above 100. The wound was completely closed, no drainage-tube being introduced. Six months after the operation she had increased twenty-five pounds in weight and was enjoying excellent health.

Case II.—Ellen F., mulatto, aged twenty-one. She was a stewardess on a vessel from South Carolina, and, as she was unable to perform her duties, she came ashore for treatment. She was married and had one male child, and gave a history of two subsequent miscarriages. She had a clear history of specific trouble developing while at sea. She applied for treatment after an illness of two weeks, with severe pain in the region of the left ovary, intensified by work or walking. There were elevation of temperature, loss of appetite, febrile disturbance, and insomnia.

Examination showed no thickening, pain, or tenderness on the right side. On the left side the tube was distended, closely attached by its lower margin to the broad ligament. The ovary was large; both it and the tube were firmly attached to the sacrum and bowel. The distended tube closely hugged the uterus and pushed it forward to the right. She was at once placed in bed. The pain continued, and operation was decided upon. A large tube containing pus, together with a cystic ovary, was removed. The pavilion of the tube contained the large pus-sacs from which leakage had probably occurred into the peritoneal cavity. There were extensive adhesions to the pelvic viscera, matting together everything on the left side. The pus-pockets were ruptured, and pus escaped into the abdominal cavity.

The abdominal cavity was carefully washed out and the *débris* removed with sponges. A glass drainage-tube was introduced, but, no suppuration following, this was removed on the third day. She made a speedy recovery notwithstanding she had not the attentions of a nurse. She remained quiet and alone most of the time in the third story of the house in which the operation was performed.

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[*] Read before the Philadelphia County Medical Society, September 8, 1886.

Case III.—Mary R., mulatto prostitute, aged twenty, single. She had never been pregnant. She had been cohabiting since she was seventeen years old. She applied for treatment, complaining of pain and irregular bleeding. Evidences of marked emaciation were present.

Examination.—There was marked local tenderness. Uterus small and pushed far forward by large tortuous and distended masses, which were posteriorly situated on the right and left. The tumor on the left side was the larger, and slightly movable. The right ovary was firmly adherent to the uterus and posteriorly. The removal of the appendages without delay was urged. Operation was performed February 17, 1885. Adhesions were general, strong, and well organized, requiring free use of ligatures at both ends of the tube, and throughout the attachment in the broad ligament. The tube was large, containing purulent cheesy matter. It was impossible to remove the right ovary on account of the strength of the utero-sacral adhesions. I failed even to find a weak point or seam at which to start the enucleation. She passed a good night. The temperature and pulse remained normal. She made an excellent recovery with the exception of a small sinus, probably leading to pus-pockets connected with the other tube or ovary. Her attendants were a number of filthy prostitutes. The surroundings were characteristic of the slums. Nothing could exceed them in dirt and disorder.

Case IV.—Mrs. S., aged thirty-six, white, married eight years. This woman I had treated three years before for an active gonorrhœa. She had apparently recovered, but continued to complain of a muco-purulent discharge accompanied with pain and tenderness. She remained under treatment, complaining of great tenderness and pain during defecation. Two weeks before her last appearance at the dispensary she was suddenly taken with cramp and agonizing pain in the left ovarian region. During the last year she had been losing flesh and strength, and. on account of her physical suffering, she was unable to perform her domestic duties.

Examination.—The right ovary was low down and far back, and as large as a small lemon, smooth in outline, and adherent. The left ovary was also enlarged. Tube tortuous, irregular, nodular, and down in the retro-peritoneal pouch. There was extreme tenderness.

Diagnosis.—"Probable pyosalpinx, with enlarged ovaries." Operation urged at once.

The examination was made February 17, 1885, and on the 25th the operation was performed, both tubes and ovaries being removed. The tubes were filled with pus. Both ovaries were cystic. The adhesions were general, strong, and intimate. The right tube and ovary were adherent to a knuckle of intestines, and in detaching them I made a tear of all the coats of the intestine save the mucous lining. The tear was four inches in length and ragged. It was closed by free suturing. The woman made an uninterrupted recovery. She has now returned to her work, and is enjoying good health.

Case V.—Mrs. R., white, married, never pregnant. Two years ago she came to the dispensary for treatment, then suffering from a posterior displacement of the uterus and abscess of the vulvo-vaginal gland. She also had mitral regurgitation. She was cured of her uterine troubles, but remained under treatment for the disease of the heart.

Three days before the operation, which was performed April 2d, she presented herself at the dispensary, having a pulse of 140 and a temperature of 103° F. Her countenance was anxious, and her breathing pectoral. Bimanual examination showed the right tube and ovary to be diseased. The tube was cylindrical and tortuous, sausage-like and boggy to the touch. During the operation, pus-pockets in the ovary and surrounding cellular tissue, containing very offensive purulent matter, ruptured into the peritoneal cavity. I found general peritonitis. The intestines were matted together, and free lymph was deposited upon them in great quantities. Some of the deposits were removed by the scissors. Free irrigation of the pelvis and abdomen was made, and large quantities of pus and lymph were removed. The enucleation was exceedingly difficult, owing to the strength of the adhesions. There were small necrosed points from which constant leakage had occurred, which thus gave rise to the peritonitis. Some distilled water was allowed to remain in the abdominal cavity.

This woman's husband was a traveler. A few weeks before her appearance at the dispensary he had returned home with a mild gonorrhœa. For years he had suffered from recurring attacks of gleet. After the operation her temperature immediately fell, but the pulse was never under 120. Pain and tenderness rapidly disappeared. No suppuration following, the drainage-tube was removed on the third day. The daily improvement was all that could be expected in one so very ill at the time of operation. When I saw her last, on the ninth day, she was happy and comfortable, and, I thought, out of danger. Unfortunately, after this time, I intrusted too much to the woman who was looking after her, and, when it was too late to make amends, it was discovered that for two days the patient had been culpably neglected. The so-called nurse had failed to administer nourishment as directed, and, when questioned as to the food taken by the patient, practiced willful deception. The patient died on the twelfth day of heart failure and starvation.

The post-mortem examination showed the peritoneal cavity to be entirely free from inflammation. There was no trace of suppuration at the seat of the stump. The abdominal incision had closed, and, though there was some external suppuration in the small pocket left by the drainage-tube, there was no connection between the seat of this pocket and the peritoneal cavity.

Case VI.—A colored woman, twenty-two years old, married three years, widow two years; two male children, oldest three years; one miscarriage, three years ago; first labor, forceps delivery; second, normal; menses, regular, but free; general health good; constant discharge and pelvic pain for the last year.

Examination.—Uterus large, forward, and movable. Cervix broad and indurated. Hard, firm, irregular bodies extending from right and left posterior.

Operation.—Inlet of pelvis was completely choked by adhesions. Tubes and ovaries were firmly adherent to surrounding pelvic viscera. Left ovary and tube were lying in sigmoid flexure, attached to left side of uterus. Both ovaries and tubes required complete enucleation. Left tube was tortuous and distended with pus. A month after the operation the patient was in perfect health. (She was presented before the Obstetrical Society, October 7th, to show the short incision.)

In concluding the history of these cases, it would seem proper to make brief reference to the views of eminent gynæcologists as to the causal relation of gonorrhœa to pyosalpinx.

Dr. Emil Noeggerath ("Trans. of the Am. Gyn. Soc.," 1876) says, in an interesting paper demonstrating the existence of latent gonorrhœa: "Gonorrhœa, in the male as well as in the female, persists for life in certain sections of the organs of generation, notwithstanding its apparent cure in a great many instances." In this paper Dr. Noeggerath held that, when it was apparently healed, it had only become latent, and in case of marriage it was invariably communicated to the wife. Gonorrhœa, as a rule, is invariably followed by tubal catarrh and ophoritis.

The fellows of the society at this time were not ready to accept his theory as correct. One member "wished to call attention to the fact that, if the views of Dr. Noeggerath were correct, it seemed as if the mere instinct of man ought to restrain one so infected from so brutal an act as becoming married to a pure woman when aware of the consequences." The president said that, if these views were true, a modification of the paper should be found in every Sabbath-school library throughout the land.

Tait ("Dis. of Women," p. 12) says: "The history of several cases which have come under my care in perfectly pure women seems to have been that the increased indulgence immediately after marriage has induced the relapse of an old gonorrhœa in the husband, which, of course, has extended to his wife."

The same author ("Dis. of the Ovaries," p. 97) says: "Acute ovaritis from gonorrhœa is a common result of the infection, and is a frequent cause of sterility."

Of ninety-nine cases of pelvic peritonitis tabulated by Bernutz, twenty-eight were traceable to gonorrhœal infection.

Schroeder ("Dis. of the Female Sexual Organs," p. 452) says: "Hence it is that a chronic pelveo-peritonitis is very commonly produced after gonorrhœal infection."

Sänger, in a paper recently read in the German Gynæcological Congress, held that latent gonorrhœa might produce no serious evidences until after childbirth, when peritonitis or pyosalpinx might develop.

It will thus be seen that pelvic cellulitis is dethroned from the prominent position it held in pelvic surgery and pathology, the weight of authority now holding the original seat and cause of abscess, exclusive of the puerperal condition, to be disease of the tubes and ovaries.

In conclusion, pardon me for a brief reference to my short trip abroad. By way of introduction I would say that, as far as my experience extends, Americans receive the kindest and most courteous treatment at the hands of the most eminent representatives of the profession of Europe. Their hospitality is that of free-hearted, cultured men. My observations began at the Samaritan Hospital. At this institution I witnessed operations by Mr. Thornton and Dr. Bantock. The work of T. Knowsley Thornton is done with wonderful care and attention to details. He follows the Listerian method in the fullest sense of the word, using spray and solutions in every case. His results are about perfect. The after-treatment receives from him the closest personal care and supervision. He strongly impresses one by the cool and deliberate manner with which he operates. I saw Mr. Thornton do five abdominal sections: three tubal, one ovariotomy, and one hysterectomy.

To the skill of Dr. G. G. Bantock Mr. Tait pays the following tribute: "It is a lesson in surgery to see him perform an hysterectomy."

Dr. Bantock has long since rejected Listerism, spray, and solutions. He practices and maintains the most scrupulous cleanliness—cleanliness that would reject "old sheets, old comforters, old pillows, and old carpets." The surgeons of the Samaritan Hospital, Thornton and Bantock, take their patients as they come, making no choice, nor do they "decline to operate." They carefully prepare their patients, and adapt the time of operating to conditions the most favorable. It is true that, as a class, the patients are stronger than those met with in this country. Again, they report all they touch with the knife. I saw Dr. Bantock perform two hysterectomies—one for the removal of a large soft myoma, the other for the removal of a large multiple fibroma. He has great skill in lengthening the stump or pedicle, to prevent drag, by completely releasing the peritoneal capsule, allowing it to retract for several inches, and applying his modification of Kœberlé's *serre-nœud* at a higher level. The wards of the Samaritan were full of patients rapidly recovering, and all showing remarkable immunity from complications. Indeed, it was most pleasing to see their happy faces and rosy cheeks. All prominent British surgeons are fully alive to the importance of early operation in cases of rapidly growing tumors, with marked local and general disturbance. They fully realize that the patient should be in a fairly good state of general health at the time of the operation. They have a dread of run-down and markedly anæmic patients. When the presence of an ovarian tumor has been fully and clearly established, they believe that delay is dangerous, and that the sooner the growth is removed the better. They hold that no substantial reason can be urged in favor of delay. This opinion extends also to active troubles in the pelvic viscera.

During a short stay in Edinburgh I had the pleasure of witnessing the work of Keith, the great ovariotomist; also that of his son, who is quite as successful and skillful in the same field as the father. You are all quite familiar with the work of these operators. As evidence of the great skill of the younger Keith, I will give you a classified table of his first series of 100 cases: 74 cases of ovariotomy with 2 deaths (53 in hospital, consecutive, without a death); 1 hysterectomy (hospital), 1 death; 1 partial hysterectomy (hospital), 1 death; 1 partial ovariotomy (malignant), 1 death; 1 exploratory incision (hospital), recovery; 22 cases of removal of ovaries and tubes, no deaths. Surely the mantle of the father has found a fit resting place on the shoulders of the son.

Now for a brief reference to the marvelous work of the great abdominal surgeon, Mr. Lawson Tait. In conversation with Sir Spencer Wells, he spoke of Mr. Tait as a bold and dexterous operator, and advised me not to fail to see him operate.

Certainly nothing could be more astonishing to the visitor than his opening of that "sacred sac, very much as we open our pockets," a place always to be entered for the removal of offending bodies. "When in doubt, open the abdomen, that doubt being that my patient will not recover if left alone." I witnessed many operations while with Mr. Tait, many and large ovarian tumors, one hysterectomy, one cysto-colotomy, the removal of 339 gall-stones, one kidney case, and a few tube cases for myoma and inflammatory troubles. He is an exceedingly careful and rapid operator;

bold but deft. He removes large tumors through exceptionally small openings. I saw him remove a large thirty-pound cyst through a two-inch incision in six minutes from the time he touched the skin with his knife until tying the last suture. The average time in the ovariotomies I witnessed was seven minutes and a half. Mr. Tait gets the "dreadful" as well as the "simple" cases. He does remove many large tumors—"those which weigh from sixty to sixty-five pounds" and upward. Owing to the fact that he has educated his professional brethren to appreciate the importance of early operation, he, of course, deals with a large number of small tumors. On the other hand, from the large number of serious cases operated upon during my stay with Mr. Tait, and from the large number constantly coming in from all parts of the world, I am free to state, without fear of successful contradiction, that "he refuses to operate on nothing that deserves the chance of life."

The unfair statement is made periodically that British operators do not publish their uncompleted operations, nor the cases on which they refuse to operate.

Many fair-minded Americans, after a short or long stay with British surgeons, know the very opposite of this statement to be true. I am daily asked, "Do you believe Mr. Tait's report of his series of 139 consecutive ovariotomies, without a death, to be correct?" There can be but one answer: Emphatically "Yes," except that the figures are short. Instead of 139, it should be 146 cases. He has no fear of the peritonæum, none of the specific carriers, of the invented special microbes, the thirty-four different varieties of germs, spores, and small beasts inhabiting the Birmingham water. With him the elaborate system of rude sponging has given place to a system of washing and drainage.

From what I witnessed, it would be impossible to exaggerate Mr. Tait's work. Of the twenty-nine operations I witnessed, many I should regard as unfavorable cases. One was that of an old woman, sixty-five years of age, greatly reduced in health, from whom he removed a large papillomatous tumor, no alarming symptoms following. I saw also one gall-stone case, one abscess of kidney, and one intro-peritoneal hysterectomy. This last woman, by the way, was from America, and made a speedy recovery. I am quite sure that all the patients I saw operated on recovered.

Dr. Johnstone, in writing, says: "Kick yourself for not staying. On our way to London to see Bantock operate, we stopped off at Coventry for a consultation, where Mr. Tait found what he thought was a strangulated ovarian tumor, which, some time ago, a very distinguished ovariotomist 'diagnosticated fibroid.' Instead of going on to London, I came back, and the next morning we had a regular lark with the thing, which turned out to be a three-gallon abscess of the kidney. It is the easiest thing in the world to extirpate one. Monday morning Mr. Tait removed a large soft myoma, and, after the usual dispensary cases, we went for your old case. Found one tube full of pus, with the other half-way pus and ovary cystic. At 9 A. M. to-morrow he goes for a large ovarian. Four other cases came into the 'Crescent' to-day. They will be operated upon as soon as the nurses can stand it and room be supplied. All the cases you saw have recovered. The gall-stones left Saturday, and the kidney case was doing tip-top at noon to-day."

In his private hospital the surroundings are perfect. He has none but young, clean, and healthy nurses. His methods are simple, his instruments few, and his incisions short. There is no superfluous penetration, the least possible manipulation of the peritoneal cavity, no rude sponging (irrigation being preferred). Rapid and gentle operating. He never needlessly and aimlessly manipulates the peritoneal cavity. In short, every step in his procedure tends to minimize the risk of operation.

His humanity knows no bounds, and his kindness to patients is an outward expression of his goodness of heart. Americans are always to be found at his board, and for them he has the kindliest feeling.

To illustrate the prevalence of pyosalpinx, and the great number of surgeons who find it common, I append the following table. The collection of cases is not so great as might be wished, but I have not yet finished the investigation of the subject. Dr. Savage's cases, Dr. F. Imlach's, and those of French and German operators are omitted.

Tait, L.	"Diseases of the Ovaries," 4th ed., 1883, p. 333.
	24 cases Hydros., and
	20 " Pyos., the last being Aug. 17, 1882.
41	1 Pyos.—Obst. Soc., Lond., May 2, 1883.
	2 " — " " " June 6, 1883.
	3 " — " " " Nov. 7, 1883.
	3 " —Brit. Gynæc. Soc., April 8, 1885.
	10 " — " " " May 27, 1885.
	1 " — " " " Oct. 28, 1885.
	1 Dble. Pyos.—Brit. Gynæc. Soc., Jan. 13, 1886.
Thornton, K.	
2	1 Dble. Pyos.—Obst. Soc., Lond., June 6, 1883.
	1 Pyos.— " " " July 5, 1882.
Hunter, J. B.	
6	3 Pyos.—Obst. Soc., N. Y., March 7, 1885.
	2 " — " " " April 21, 1885.
	1 " — " " " Jan. 5, 1886.
Wylie, W. G.	
13	8 Pyos.—N. Y. Acad. of Med., Jan. 15, 1885.
	1 " 1 L. Pyos. } "Med. Rec.," N. Y., 1885, xxviii, 227–'9.
	3 Pyos.—Med. Soc. State N. Y., Feb. 2, 1886.
Janvrin.	
1	1 Pyos.—Obst. Soc., N. Y., Nov. 3, 1885.
Fowler, J. Kingston.	
11	9 Dble. Pyos.—Med. Soc., Lond., April 28, 1884.
	2 R. " — " " " " " "
Aveling, J. H.	
1	1 Dble. Pyos.—Brit. Gynæc. Soc., March 11, 1885.
Thomas, T. G.	
2	2 Dble. Pyos.—"Bost. M. and S. J.," 1883, cviii, 12.
Silcock, A. R.	
1	1 Pyos.—Med. Soc., Lond., Oct. 19, 1885.
Nilsen.	
1	1 Pyos.—Obst. Soc., N. Y., Jan. 19, 1886.
Baer, B. F.	
1	1 R. Pyos. & L. Hydros.—Ob. Soc., Phil., Dec. 3, 1885.
Kelly, H. A.	
1	1 Pyos.—Obst. Soc., Phila., Jan. 7, 1886.

Savage.
2 2 Dble. Pyos.—Midland Med. Soc., Bir., Nov. 22, 1882.
Smith, Greig.
2 2 Pyos.—Brit. Gynæc. Soc., April 14, 1886.
Imlach, F.
2 2 Pyos.
Goodell, W.
1 1 Pyos.—"Med. News," Phila., Jan. 30, 1886.
Keith, Thomas.
1 1 L. Pyos.—"Contributions to the Surg. Treatm. of Tumors of the Abdomen." Case I.
Martin, August.
1 1 L. Pyos.—"Am. J. of Ob.," May, 1886, p. 469.
Leopold.
4 3 Pyos. 1 Hydropyos. } "Am. J. of Ob.," May, 1886, pp. 533, 536.
Klotz.
1 1 Dble. Pyos.—"Am. J. of Obst.," May, 1886, p. 538.
Marion-Sims, H.
2 2 Pyos.—Obst. Soc., N. Y., April 6, 1886.
Mundé.
1 1 Dble. Pyos.—"Am. J. of Obst.," June, 1886, p. 609.
Lee, C. C.
1 1 Dble. Pyos.—"Am. J. of Obst.," June, 1886, p. 613.
Carhart, J. W.
1 1 R. Pyos.—"Texas Cour. of Med.," 1885–'86, iii, 225.
Elliot, J. W.
1 1 Dble. Pyos.—"Bost. M. and S. J.," 1886, cxiv, 344.
Porter, G. W.
1 1 L. Pyos.—Rhode Isl. Med. Soc., March 19, 1885.
McLaughlin, J. W.
1 1 Pyos.—"Texas Cour. of Med.," 1884–'85, ii, 435.
Price, M.
1 Abscess both Ovaries.—Ob. Soc., Phil., Sept. 2, 1886.
Price, Joseph.
6 cases reported in this article.

13 cases in which gonorrhœal infection was established:
1 by Leopold.
2 " Wylie.
4 " Tait, L.
6 " Price, J.

22 Dble. Pyos.
4 L. Pyos.
3 R. Pyos.
1 R. Pyos. with L. Hydros.
1 Hydropyos.

RABIES, AND HOW TO PREVENT IT.[*]

BY VALENTINE MOTT, M. D.

ESSENTIALLY an old disease, despite what many say, since we find mention of it in old Latin and Greek authors, it is probable that the name of none of the ills inflicted on suffering humanity strikes with such dire effect upon the ordinary mind as this one word rabies, or hydrophobia. For many years this last term has been applied more especially to the disease as it manifests itself in the human being, and even in this case it is a misnomer, and the sooner it is done away with and banished from both scientific and ordinary dictionaries the better. Derived from the Greek (ὕδωρ, water, φόβος, fear), it indicates a symptom found in certain cases in man, but by no means invariably, and only rarely met with in dogs and other animals. The apparent dread of all liquids in man is more especially intensified by the fact that all attempts to swallow are extremely painful, even in the case of solid food, and spasm of the larynx, pharynx, and œsophagus being brought about by the attempted ingestion of liquids. There is no fear of the liquid itself; it is the paroxysm that is almost certain to follow its being swallowed, or even an attempt at swallowing it, that is so much feared and dreaded by the human being.

Because a dog drinks water, let not the mistake be made of saying that he is not suffering from rabies. During the first stages of the disease the dog drinks water ravenously, and, even after the constriction has taken place in the throat, which renders its deglutition difficult, the mad dog will push his head deep into the water and try to force it down. Dogs have been known to swim rivers during the ferocious stage, and in many cases described by the most competent authorities water has not only been drank, but taken in such exceptionally large quantities as to cause remark.

Let not, then, the fact that the suspected dog drinks water lead any one to pronounce the bitten person free from danger, and not in need of precautionary and preventive treatment, as has been done before this, and serious results followed.

To this end let us do away with the word hydrophobia, and substitute the more generic term rabies. Let this term be used by all to denote the disease caused by the specific poison generated in the dog, cat, fox, jackal, hyena, and wolf, manifested by certain symptoms referable to the nervous and secretory systems, and capable of being transmitted by inoculation (more especially by the bites of these animals) to man and almost all warm-blooded animals. This disease, when once manifested, is almost invariably fatal; in fact, those cases reported as cured are, in great measure, doubtful, being probably what is known as pseudo-hydrophobia—the result of an over-wrought imagination. This state undoubtedly exists, and in certain cases death results from it, so great is the power of the mind over the body. Nor is the state always recognized, and it is only by subsequent experiment—namely, the inoculation of dogs and rabbits from the brain and cord of the subject, and their becoming or not becoming affected with rabies—that a correct diagnosis of what the disease was can be arrived at.

Rabies was feared by the ancient Greeks, and we find it mentioned in Aristotle and undoubtedly referred to in Homer, Euripides, and Hippocrates. Celsus, the celebrated physician who lived during the century before the Christian era, described it well in his "De medicina," and recommended those measures which have been deemed so efficacious in modern times—namely, caustics, burning, cupping, and the sucking of the wounds of those bitten by rabid dogs. Paulus Ægineta, in his work entitled "De re medicina," gives a good account of rabies in the human being, enumerating the symptoms as described by previous authors, of which there were many, and dividing it into two essential varieties—namely, that produced from the specific poison of the bite of a rabid animal and always fatal, and the purely nervous or pseudo-hydrophobia produced by other causes. Authors in various languages have followed the lead of these forefathers of medicine, and in every tongue we find descriptions of rabies, together with infallible nostrums for its cure. Not only were external remedies recommended, but also internal treatment of the most nauseous kind, and even religion itself was called to the aid of those afflicted or likely to be afflicted after bites, and the good St. Hubert was invoked, and certain ceremonies performed at his shrine, in order to obtain immunity therefrom.

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[*] Read before the American Social Science Association, September 8, 1886.

Many epizootics of rabies have occurred, and it may almost be said that no place is absolutely free from its ravages, though it seems to be most frequently found in France, Germany, upper Italy, and Holland. Great Britain is by no means free from it, and in Russia it is frequent, especially among the wolves that infest that country. In this country, to my mind, it undoubtedly exists at times; during the last year to a greater extent than for some time before, far more cases having been brought to the attention of the public at large through the press.

As regards the question of the spontaneous origin of rabies in the dog, no point in connection with this disease has been more thoroughly discussed, and in no case have the authorities come to so little conclusion. To me it seems still a doubtful point, with the weight of the evidence in favor of spontaneity. Undoubtedly the great majority of cases are of a traumatic origin, but the disease must at one time or another have had a beginning, and we hear of a number of cases in which it is utterly impossible to trace any bite from a dog already mad.

For a long time it was supposed that the season of the year had an influence in determining the existence of madness, and the term "dog-days" has become universally used in the English language to designate that hot weather during which the dog was most likely to be taken. Statistics, however, seem to point to April and May as the months during which, perhaps, the outbreak of the disease is the most prevalent, though there is only a slight difference, and it would seem as though it were as prevalent in the winter months as in the summer—a fact startling, though true. It does not seem as though warm climates tended to increase the disease; in fact, the contrary may almost be said to obtain, as we find it more frequently in the temperate zone.

Many have maintained that the disease only existed in the male, or at all events that the female was comparatively free from it. The first statement is absolutely false, in one case a whole pack of female hounds being attacked by it; and the second is well accounted for by the fact that the dogs outnumber the bitches to a great excess, there being, I believe, in the State of New York alone, seven dogs to every bitch.

We will now take up some of the more characteristic symptoms of rabies as manifested by the dog—symptoms it would be well for every one to know and guard against, by having the suspected animal confined and carefully watched, so that any outbreak might be warded off. In case any one has been bitten, it is far better that the dog be allowed to live, so that it may be watched and the people put out of their suspense should the dog not be mad.

Death will certainly follow within ten days should the dog be suffering from rabies; in the majority of cases, on the fourth, fifth, or sixth day after the appearance of the first symptoms of the disease.

The dog attacked with rabies does not in the beginning show any violent symptoms of madness or fury; he does not bite, but rather becomes more affectionate, licking the hands and face of those whom he has been attached to. Even at this period the saliva is poisonous and inoculation may take place. It soon after begins to be more morose and sullen, tries to hide itself away, but, not content with any one place or position, is restless and changeable and wears a far-off look in the eyes, snaps and barks at imaginary objects. It still, however, remains obedient to its master, and so continues to a great extent through the whole disease, acknowledging his power and seeking to comply with his commands. The desire to bite is soon developed, and manifests itself in the first place against inanimate bodies—pieces of wood, stones, matting, rugs, in fact anything that may be near it, all of which goes to form a mass in the stomach, which is regarded as one of the post-mortem characteristics of rabies. It now, if possible, escapes from home and rushes around the country, its anger being more especially developed by the sight of other dogs, which, as a rule, it immediately attacks and bites. In fact, though a rabid dog may be in the quiescent state, upon the approach of another dog an access of fury will be developed and a violent onslaught will be made. The well dog, recognizing by some unknown process the presence of danger, will slink away, even though more powerful, and try to escape. Early in the disease a peculiar bark is developed, which is known as the cock-crow, resembling this in a certain way: the first note of each three successive howls remaining constant, the second notes being in an ascending scale, one tone apart, the last being the octave of the first note. There is no fear of water, and, although there may be foaming at the mouth, it is by no means a constant symptom.

A peculiar characteristic in the mad dog is the absence of the sense of pain; a red-hot poker will be grasped and held on to. Dogs will bite themselves and still utter no cry. Periods of calm succeed these accesses, the danger from inoculation still existing. Exhausted by the paroxysms and the fighting it has done, the dog will still continue on in its unsteady gait, with the tail between its legs, eyes wandering and head rolling from side to side, and the mouth open and tongue protruding, until at last, entirely gone, it will lie down to die of asphyxia and paralysis.

What is known as dumb madness rarely affects dogs, though, when rabies is communicated to rabbits by inoculation and introduction of rabic material under the dura mater, this variety obtains in ninety-nine cases out of a hundred. Its distinctive characteristic is paralysis. In it the lower jaw hangs down, the saliva pours from the mouth, motion becomes less and less, and the animal dies a comparatively painless death, the functions of the various organs of the body gradually being suspended.

In the human being, the first symptoms of the fatal attack seem to be a peculiar itching of the old wound and the spread of neuralgic pains from it toward the nerve centers; a general feeling of malaise and an impending dread of something frightful about to happen, a tightness about the throat, and there is difficulty in swallowing. Breathing becomes affected, and there is oppression over the whole chest. Violent paroxysms follow, showing evidently that the whole nervous system is in a most frightfully excited state. A ray of light, a breath of wind on an exposed part of the body, the sight of water sometimes, the constriction following an attempt to swallow it, greatly craved though it may be—are sufficient to determine a spasm. Ropy, viscid mucus is secreted by the salivary glands and vehemently expelled from the mouth. Violent convulsion of the muscles of the larynx and pharynx takes place in many cases, closing the wind-pipe and preventing the access of air. Hallucinations come on, and sometimes wild delirium. During the interval of the attacks the sufferer is often calm and rational, and in many cases, feeling the approaching access, begs to be restrained so that he may do no harm. Paralysis finally supervenes, and the sufferer, totally exhausted, is mercifully relieved by death.

True rabies is necessarily fatal in the present state of our scientific knowledge. Drugs and treatment of every kind, sort, and description have been tried without avail; all that can be done is to attempt to relieve the frightful symptoms as best we can, and it is certainly justifiable to try any remedy that holds out the slightest chance of affording even a minimum of relief, to say nothing of anything that might effect a cure.

The period of incubation of rabies is very variable, different authorities giving the shortest period in the dog at from five to ten days (Renault), and the longest fourteen months (Haubner), the majority of cases occurring in from three to seven weeks after the bite. In the human being the ordinary period of incubation is six weeks, though cases have been noted in which the period was only two days, and others which extended over four and five years (Thamhaym).

As regards the likelihood of having rabies after having been bitten by a rabid dog, the authorities are also at variance, though at the present time it is fair to say that about 16 per cent. of those bitten are affected (Holmes and Leblanc, the veterinarian, of Paris). Others make the percentage of escape 60. Again, out of 320 cases, 129 perished, making 40·31 per cent. (Bouley). In another lot 33 per cent. died (Renault), and, again, in twenty-four cases only one died (John Hunter). Van Buren says that two out of three bitten have rabies.

As regards prevention, undoubtedly, in the first place, the wound should be cauterized, no matter what subsequent course is to be pursued. Let water be dashed over the wound so as to cleanse it, and apply immediately nitric acid. This to my mind is infinitely better than nitrate of silver, carbolic acid, or the actual cautery, one of which may be used in the absence of the first named. To make assurance doubly sure, the part bitten may then be excised and the wound again cauterized. I am opposed to the method of sucking the wound, as it exposes another person to danger.

(To be concluded.)

A CASE ILLUSTRATING THE VALUE OF THE TUBERCLE BACILLUS AS AN AID TO AN EARLY DIAGNOSIS IN PHTHISIS.

By E. L. TRUDEAU, M. D.,
SARANAC LAKE, N. Y.

The following case, occurring under my observation, has seemed to illustrate some points of interest bearing on the infectiousness of phthisis and the value of the tubercle bacillus as a help to an early diagnosis:

Miss N. W., aged twenty-four, American, family history good, came in the fall of 1885 as child's nurse to a lady, then under my care, who was suffering from advanced pulmonary phthisis with progressing excavation. Miss N. had an excellent family history and had always been well herself; she was constantly in the sick-room and in daily attendance on the invalid. Five months later, in March, 1886, I was asked to see her, as she had taken cold, and found her suffering from the usual symptoms of a moderate bronchitis. Two weeks later, being informed that she was still coughing, I examined her more carefully; her temperature was 100·75°, pulse 90, skin moist, and tongue clean. In the chest nothing beyond marked feebleness of vesicular murmur at left apex and some scattered coarse râles in both lungs was observed. As I was then making sputum examinations, it occurred to me to obtain a sample of the expectoration for study. To my astonishment, a few tubercle bacilli were detected, and subsequent examination showed them in great numbers. A diagnosis of phthisis with its accompanying unfavorable prognosis was given, and, as the family was on the eve of departure, the case was lost sight of for the time. In August, 1886, five months later, an application for admittance at the Saranac Lake Sanitarium was made for Miss N. W., the physical signs as given by the attending physician being as follows: "Whole upper portion of left lung hepatized with moist sounds; right lung beginning to be involved; emaciation, fever, sweats, and purulent sputa present." When heard from again in September she was failing rapidly and unable to be moved.

Deficient as any evidence of direct contagion in phthisis must always be, it must be conceded that many facts in the foregoing case seem to point to more than mere coincidence. The girl had always been healthy, there was no phthisis in her family, she was in a good climate and under excellent hygienic conditions when after less than five months of exposure the first symptoms of the phthisical process made their appearance and progressed uninterruptedly. I am not aware of any other case where the presence of the bacillus has been demonstrated so early in the disease. The cough came on quite suddenly and had only lasted a little less than three weeks, and there was nothing sufficiently marked in the physical signs to admit of a positive diagnosis of phthisis when the bacilli were detected, their recognition at once entirely changing the diagnosis and prognosis in the case.

Correspondence.

LETTER FROM PARIS.

Educational Facilities in Paris.—M. Polaillon's Case of Gastrotomy.

Paris, *October 1, 1886.*

To take up the question of medical study in Europe, some remarks might be made, first, on its comparative cheapness in the city of Paris. In London one is asked to pay some thirty-six dollars for a single term of three months' study, for instance, at Guy's or any of the other hospitals. While it is true that, on presenting your card and making yourself known, you will meet with some civil attention, yet, if you really want to work over the cases yourself, and get practical experience, you will have to pay for the privilege. Next, Germany and Austria attract attention. There it may be cheaper than in London, but all the same it will have to be paid for. There are a hundred and one little clinics in Vienna, very central and interesting (more or less), where one can pick up a great deal of information which would not be very dear; still, if several courses are taken, it will cost pretty well every quarter. We now come to the advantages of Paris for medical study. Here everything official is absolutely free; any one, be he medical man or student or not, can attend all the lectures at the Paris school, and, for that matter, at all the other French medical faculties, for nothing.

The same is true at all the hospitals, and their numerous clinics, given by the best professors, are also open to any one who chooses to enter. The wards of the hospitals, too, are open to those who wish to follow the physicians as they make their morning rounds, and the patients may be interrogated by any one before or after the chief physician or surgeon, as the case may be. In theory one is supposed to have an entrance ticket or else be a student of medicine, or a visiting foreign doctor, but in actual practice no questions are asked, and all who desire walk in and do just as they like. It may also be stated that the amiable secretary of the Paris faculty of medicine, Monsieur Pupin, will at once grant an entrance ticket to those hospitals where it might be asked for, such as the faculty's *Maison d'accouchements*, to any foreign physician who makes an application to him, free of any charge.

In regard to laboratory work and dissection, with practical surgery work, etc., an application, with card, to the very accommodating and friendly dean of the faculty, Professor Béclard, will obtain admittance here also, and a ticket of permission to work at the *Travaux Pratiques* only costs $8 for the year. This permits six months' dissections, with as many subjects as may be wanted, from October to March, every season; or it will give admittance to the practical surgery classes, where in eighteen lessons, under Professor Farabeuf, all the amputations and ligations are done on the cadaver by each and every student. The same ticket will also admit to the chemical, physical, botanical, and physiological laboratories, where practical work is done by the student, all materials being provided by the Government; so the scholar may break as many glass retorts as he likes, and not have to pay for them.

All the foregoing does not refer to those who may desire to obtain the Paris diploma, but these studies can be taken independently of that object by any foreign doctor. As to those who desire the French diploma (the only legal qualification to practice medicine in the French dominions), it is quite a different matter. For several years back the French Government has discontinued giving permission to practice without examination. What was called the *licentiate* was abolished, owing to remonstrances from many of the medical authorities. This had been formerly accorded to foreign physicians, and most of the Englishmen and all of the Americans practicing here obtained it; but at present all the applications are referred to the faculty, who insist on all passing the whole of their examinations, which consist of eleven (according to the new *régime* commenced last year). These examinations are held in public, before a jury of three professors.

The first one is in botany, zoology, physics, and chemistry, and the rest are on the usual medical and surgical subjects with which you are familiar in America. All of them are very close and severe, each one lasting about an hour and a half for a set of three or four students, during which time each person is interrogated by every professor about five minutes at a time. A failure to pass causes a reference to study for three months, during which time no further examinations can be attempted.

A question of interest in connection with European study is that of language, and, to those who do not possess a knowledge of other languages, French can be recommended as easier to learn than German; but it must not be inferred that a fair acquaintance with any foreign language can be had without devoting two hours daily to it for a period of at least six months, and best in the country where it is spoken, if one hopes to catch the pronunciation. This need not prevent medical study, which can very well go on practically with the study of the language. It must be admitted that the German teachers have, as a rule, more knowledge of English than the French, but, on the other hand, it can not be denied that their occasional stumbling explanation of technical points in "half-English" will not be of much help to students who are not thoroughly familiar with the subject in question, so that, after all, it is best to get it in the original.

About the cost of living: To make a broad statement and a true one, based on a personal experience of some years' standing, *it is not cheap anywhere in Europe*, and, to come at once to figures, it will cost $10 a week to get along comfortably in any of the countries mentioned. A minor subject, that may have its importance to many, is climate, and here, again, Paris will compare favorably with the other cities, its climate being far preferable to the fogs of London and to the northeasterly snow-storms and cold of Vienna. It is rare that there is any extreme cold weather during the winter in Paris, while there may be, and often is, very fine weather. The climate is in fact mild, compared to the rigor of New York and Philadelphia, in winter.

M. Polaillon has just presented to the Academy of Medicine the patient from whose stomach he had removed a fork which the man had swallowed. This case was referred to in one of your late leading articles. On the day of the operation the patient felt some pain about the level of the stomach, which prevented any forced inspiration and made micturition difficult. A sound had to be used. However, there was no vomiting, nor were there any signs of peritonitis. No food was given by the stomach during the first twenty-four hours, but two injections of soup were given and retained. The next day seven or eight spoonfuls of iced soup were given, and the third day only champagne and water, with three injections (*per rectum*) of peptone and wine. This was continued until the normal alimentation was again taken up. He was a week without defecation, but from then all went on regularly, and on the tenth day he took a mutton-chop. There was a slight attack of jaundice, and a small abscess formed at the level of the abdominal incision. Three weeks after the operation he walked out in the garden, and at the present moment he has no pain, and all the normal functions are in their usual state of health, he can bend in all directions, and the stomach can no doubt move in all directions; so that there is no adherence.

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THE SPECIALTY OF GENERAL PRACTICE.

Not long ago a lady came from one of the northern cities of the State to spend the winter in New York. Having made her whereabouts known to her acquaintances here, she presently received a number of calls. Among those who called on her was a physician. She knew enough of this gentleman to lead her to trust to his judgment concerning his professional brethren, and, prudent woman that she was, she took occasion to ask him what physician she had better send for in case of need. The doctor replied that that would depend upon the nature of whatever trouble she might have, and then mentioned one after another of his colleagues, stating the specialty in which each of them was excellent. "Oh, yes," rejoined the lady, "that's all very well. I know now whom I can depend upon among the specialists, but I don't think I'm likely to need their services. What I really want to know is, whom to call in if I'm sick." Thus narrowed down, the lady's question was found not so easy to answer. Her interlocutor was a specialist; he knew his brother specialists, but he had not given much thought to the general practitioners of the town. To find specialists waved aside, and family physicians in demand, was doubtless somewhat staggering to our friend, but it is only fair to say that he soon gathered himself together and helped the lady to a most judicious choice.

The incident is not only amusing; it is suggestive as well. It brings up the query whether general practice is not entitled to be looked upon as a specialty in itself. We have not now in mind the pleasing little arts by which successful family physicians endear themselves to their patients. He who practices them, whether unthinkingly and in sheer conformity to his innate impulses or in pursuance of a line of policy that he has laid down for himself, no doubt helps himself along wonderfully; but, after all, they can conduce to lasting success only on the condition that they are underlain by certain natural qualities that may truly be called special—characteristic of the individual. Those of us who have seen much of medical men and their practice are inclined to admit that native gifts are apt to hold their own as against acquirements; that acumen, or "sabe," or whatever else we may choose to call it, counts for quite as much as technical precision. Arraying an elaborately "fine" diagnosis, a prognosis nicely worked out from statistics, and dexterity of manipulation and topical treatment, on the one hand, against acuteness in scenting out diathetic peculiarities, rapidity in excluding non-essentials and coming to the point, and ingenuity in accommodating therapeutical measures to the circumstances of the patient as well as the "indications," on the other hand, we may well grant that it is not altogether unreasonable to maintain that there is such a thing as the specialty of general practice, anomalous as the expression may seem.

A NEW METHOD OF STUDYING THE ANATOMY OF THE BRAIN.

At a recent meeting of the Paris Academy of Medicine, M. Luys showed a specimen of remarkable interest, both from its bearing on the question of the cerebral origin of hysteria and from the special way in which it had been prepared. It was the hardened and mummified brain of a woman who had presented hysterical phenomena during her life, specially characterized by an extraordinary nervous and emotional excitability, but had died of some intercurrent affection. There was plainly to be seen in the specimen a sort of supplementary fold at the level of the fissure of Rolando, proceeding from the oval lobe and being interposed like a wedge between the ascending parietal and the ascending frontal convolutions. Moreover, there was a decided thickening of the convolutions, especially at the base of the ascending parietal. The right lobe was not so much involved at the corresponding region, and there there was a very perceptible interruption of the continuity of the ascending convolution. Finally, the lobus quadratus on either side presented a considerable development, and the regions of the paracentrals were notably prominent.

The specimen will doubtless be described more minutely in the Academy's "Bulletin"; the summary here given is taken from the report of the proceedings of the meeting published in the "Gazette hebdomadaire de médecine et de chirurgie." M. Luys stated that, so far as he was aware, the appearances in question had never been found in a normal brain; nevertheless, he would not pretend that they were characteristic of hysteria—he simply put them forward as an addition to our stock of observed facts. The life-long persistence of hysteria—its subjects being born hysterical and living and dying hysterical, and often inheriting it—was suggested, however, as perhaps favoring to a certain extent the idea of the dependence of the manifestations of the disease on some structural peculiarity.

As to M. Luys's method of preparing brains, its chief novelty seems to relate to matters of detail. In its results, we doubt if it differs materially from the process of prolonged alcoholic irrigation that has been employed for a number of years by Professor Wilder, of Cornell University. M. Luys's procedure is the following: The cerebral substance is immersed successively in baths of a saturated solution of potassium bichromate, of methyl alcohol, and of a saturated solution of chloral. In this way such a remarkable induration is produced that strips of the white substance may readily be detached, by a sort of cleavage analogous to that of wood or of certain crystals. Some brains so prepared, shown at the meeting, exemplified very clearly the individuality and the disposition of two systems of white fibers harmoniously arranged around central nuclei. There was also to be seen the whole system of radiating thalamo-cortical fibers passing from the optic thalami toward all points of the cortex, including the posterior fibers noticed by Kölliker, those of the corona of Reil, and those of the internal capsule—a dependency of the special radiated system which might be called the system of cortico-striatum fibers, and which appeared to serve as a bond of union between the psycho-motor regions of the cortex and the supposed motor nuclei of the brain.

M. Luys expressed his confidence that brains hardened after this method could be preserved for a great length of time, but, he added, even if this should not prove to be the case, the plaster molds that he had been able to take of them would undoubtedly serve for their reproduction, in all but the natural material, at any subsequent time. In the mean time, they would at all events last long enough to enable investigators to verify the accuracy of the photographs that had been taken of them. It will be interesting to learn more of the method, particularly as to the length of time that the specimens are kept immersed in the various baths.

MINOR PARAGRAPHS.

THE WARD'S ISLAND INVESTIGATION.

As the investigation in the matter of the alleged ill treatment of corpses proceeds it does not become at all clearer that there was really any occasion for it. The examination of the chief of staff on Tuesday showed that there was a disposition on the part of at least one of the officials to bring up the most trivial and irrelevant matters, if only they could be made to show to Dr. Marple's disadvantage. Perhaps the prosecuting commissioner's energy in the investigation is connected in some way with his idea that "the nurses and orderlies held their positions under the doctors, and were taught to consider a commissioner as nobody"—truly an insufferable state of things to a commissioner.

THE FEVER IN MISSISSIPPI.

Although the reports from Biloxi are contradictory and largely based on hearsay, it seems tolerably well established that some form of fever is prevalent there. The time-honored controversy as to its nature appears to rage quite as fiercely as the fever itself. The action taken by the Louisiana State Board of Health in prohibiting the entrance into the State of persons and goods from the county in which Biloxi is situated must be said to be energetic, whatever else may be thought of it. This decided course is said to have been taken in consequence of a failure on the part of the Harrison County authorities to keep their promise, made last summer, to inform the board of any fresh outbreak.

THE NEW YORK OBSTETRICAL SOCIETY.

The recent annual election of officers, mentioned elsewhere in this issue, suggests some reflections as to the prospects of this society. The organization has done good work in the past, and, although of late the steadily increasing importance of the Academy of Medicine's Section in Obstetrics and Diseases of Women and Children seems to have drawn off some of the old members, the society has perhaps successfully met the exigency by enlarging the limits of its membership. Although this change was made several months ago, however, not so many new members have been added as seems desirable. This is probably owing in great measure to a natural disinclination on the part of young men to have their candidacy smothered in committee. It is not to be supposed that the committee on admissions would subordinate the good of the society to its own likes and dislikes, but it is useless to ignore the impression to that effect that has taken root in the minds of a number of men who ought to be members. The best way to dispel that impression, we think, would be for the society to give up its policy of practically allowing the committee to settle a candidate's fate, and of keeping the constitution of the committee secret. Most men would rather be blackballed in open meeting than be thwarted in their efforts to come before the meeting. Besides that, the composition of such a committee can not be kept a profound secret, and the attempt in that direction is made ridiculous by failure.

ITEMS, ETC.

Infectious Diseases in New York.—We are indebted to the Sanitary Bureau of the Fourth Division of the Health Department for the following statement of cases and deaths reported during the two weeks ending October 19, 1886:

DISEASES	Week ending Oct. 12.		Week ending Oct. 19.	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever	60	12	45	11
Scarlet fever	17	5	28	2
Cerebro-spinal meningitis	1	1	2	1
Measles	69	6	98	8
Diphtheria	57	33	66	34

The Health of Burlington, Vt.—According to the Health Officer's "Report of Vital Statistics" for September, the whole number of deaths for the month was 19, including 2 from cholera infantum and 4 from croup and diphtheria.

The Health of San Francisco.—According to the Health Department's "Condensed Statement of Mortality" for September, the whole number of deaths for the month was 394, including 67 from zymotic diseases.

The New York Obstetrical Society.—At the annual meeting, held last Tuesday evening, Dr. Paul F. Mundé was chosen president for the ensuing year, Dr. George T. Harrison and Dr. Bache McE. Emmet vice-presidents, Dr. Henry C. Coe recording secretary, Dr. Egbert H. Grandin corresponding secretary, Dr. Edward L. Partridge treasurer, and Dr. James B. Hunter pathologist.

The Harvard Celebration.—Medical science is not to go wholly unrepresented among those invited to take part in the coming celebration of the two-hundred-and-fiftieth anniversary of the establishment of Harvard. Professor Joseph Leidy is to represent the University of Pennsylvania.

St. Luke's Hospital.—The amount received by the hospital during the year, as reported at the recent annual meeting, was $65,000—a sum said to be far in excess of the usual receipts—from bequests and endowments of beds. The late Mr. W. H. Vanderbilt's bequest of $100,000 is being used partly in building an administrative house.

The New York Academy of Medicine.—We learn that the sum of $25,000 has lately been given to the Academy by a lady, in pursuance of her late husband's benevolent intentions.

The Medical Society of the County of New York.—The eighty-first annual meeting will be held next Monday evening. The following-named gentlemen have been nominated to office: For president, Laurence Johnson, F. R. S. Drake, Andrew H. Smith; for vice-president, F. R. S. Drake; for secretary, W. M. Carpenter; for assistant secretary, C. H. Avery; for treasurer, O. B. Douglas; for censors (five to be elected), Daniel Lewis, H. T. Peirce, W. E. Bullard, W. O. Moore, J. S. Warren, E. Waitzfelder; for delegates to the Medical Society of the

State of New York (twenty-four to be elected), J. F. Aitken, L. B. Bangs, T. H. Burch, S. S. Burt, A. N. Brockway, C. E. Bruce, H. B. Conrad, J. L. Corning, H. E. Crampton, A. F. Currier, W. B. De Garmo, O. B. Douglas, E. D. Fisher, J. H. Fruitnight, G. M. Hammond, N. J. Hepburn, L. E. Holt, C. G. Johnston, W. H. Katzenbach, S. Lloyd, H. P. Loomis, W. M. McLaury, J. A. Moore, W. O. Moore, P. A. Morrow, H. T. Peirce, W. C. Phillips, C. C. Rice, F. W. Ring, W. Stevens, S. O. Vander Poel, R. Van Santvoord, E. Waitzfelder.

The Congress of German Naturalists and Physicians.—The fifty-ninth meeting, we learn from the "Deutsche Medizinal-Zeitung," was attended by four visitors from Australia, six from Africa, eighteen from Asia, fifty-four from America, one hundred and forty-six from Austro-Hungary, forty-one from Switzerland, twenty-nine from Denmark, Norway, and Sweden, fifty-five from Russia, twenty-seven from Holland and Belgium, eight from France, seventeen from England, fifteen from Italy, four from Spain and Portugal, and five from Turkey, Greece, Servia, and Roumania.

The Vienna Medical School.—According to the catalogue for the winter semester of 1886–'87, the number of students (ordinary and extraordinary) during the last semester was 2,289—2,149 ordinary and 140 extraordinary. Those from the Austro-Hungarian empire numbered 2,115, and those from abroad 174. The whole number of students in all departments of the university during the semester was 5,358. Professor Bandl, of Vienna, the former extraordinary professor of gynæcology, has been nominated to the ordinary professorship of obstetrics and gynæcology at Prague, as the successor of Professor Breisky, called to Vienna. Professor Anton Wölfler, Billroth's late assistant, goes to Gratz as professor of surgery.

The late Dr. McBride.—At a meeting of the Medical Board of the Presbyterian Hospital, held October 16, 1886, the following resolution was adopted:

"*Resolved*, That in the death of Dr. Thomas A. McBride the Medical Board of the Presbyterian Hospital has lost a member whose high professional attainments, devotion to duty, and winning personal qualifications have won for him the highest esteem of his associates. Though still far from having reached the meridian of life, he was deservedly in the enjoyment of the full noon-day of professional reputation. While we mourn deeply the loss of our friend and associate, we realize that the good work which he has done remains as a monument to his conspicuous ability, and as a stimulus to his survivors to a like devotion to the highest aims of their calling."

The late Dr. Hamilton.—At a meeting of the New York County Medical Association, held last Monday evening, the following preambles and resolutions, offered by the vice-president, Dr. John Shrady, were adopted:

Whereas, It has pleased the Almighty Disposer of Events to remove from the sphere of his usefulness our much-respected co-worker, Frank Hastings Hamilton, M. D., LL. D.; and

Whereas, The New York County Medical Association desire to express a sense of their bereavement, in common with the many organizations with which he was connected; therefore be it

Resolved, That the fullness of his days has been a record of a well-spent life; and that his work has adorned the surgical annals of America, borne his name beyond the borders of our hemisphere, and added to the solid contributions to medical literature.

Resolved, That as a scholar in his chosen science he has won a place among the worthies of all tongues; and that he has conscientiously weighed all his statements and given to the world the results of a ripe experience and a most painstaking discrimination.

Resolved, That his professional life has been gauged by the strictest regard to the right; that his loyalty, ever unimpeached, was never expended upon the unworthy, nor his unswerving rectitude ever challenged even by the captious multitude.

Resolved, That the memory of his many virtues will ever linger with us, and that we tender to his family our sympathies, assuring them that his humanity, his sterling merit, and his valued counsels have not been unappreciated by those who had the honor of association with him.

Army Intelligence.—*Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from October 3, 1886, to October 16, 1886:*

Matthews, Washington, Captain and Assistant Surgeon. Granted leave of absence for one month and twelve days, with permission to go beyond sea. S. O. 232, A. G. O., October 6, 1886.

Fisher, W. W. R., First Lieutenant and Assistant Surgeon. Leave of absence extended one month. S. O. 230, A. G. O., October 4, 1886.

Borden, William C., First Lieutenant and Assistant Surgeon. Relieved from temporary duty at Fort Bridger, Wyoming, and ordered to return to his station, Fort Douglas, Utah. S. O. 126, Department of the Platte, October 2, 1886.

Hammond, John F., Colonel and Surgeon (retired). Died at Poughkeepsie, N. Y., September 29, 1886.

Everts, Edward, First Lieutenant and Assistant Surgeon. Ordered to proceed to Fort Grant, Arizona Territory, and there take station. S. O. 94, Department of Arizona, October 1, 1886.

Fisher, W. W. R., First Lieutenant and Assistant Surgeon. Ordered, on the expiration of his leave of absence, to report to the commanding officer, Fort Bidwell, California, for duty as post surgeon. S. O. 93, Department of the Columbia, October 4, 1886.

Naval Intelligence.—*Official List of Changes in the Medical Corps of the United States Navy for the two weeks ending October 16, 1886.*

Suddards, James, Medical Director. Will convene Medical Board, October 6, 1886.

Browne, J. Mills, Medical Director. Ordered to report to the President of the Medical Board, October 6, 1886.

Dean, R. C., Medical Director. Ordered to report to the President of the Medical Board, October 6, 1886.

Woolverton, Theoron, Surgeon. Detached from the U. S. S. Shenandoah, and to proceed home and wait orders

Means, V. C. B., Assistant Surgeon. Detached from the U. S. S. Shenandoah, and ordered to Receiving-ship Independence.

Parker, J. B., Surgeon. Detached from the U. S. S. Swatara, and to proceed home and wait orders.

Shafer, Joseph, Assistant Surgeon. Detached from the U. S. S. Swatara, and to proceed home and wait orders.

Marine-Hospital Service.—*Official List of Changes of Stations and Duties of Medical Officers of the United States Marine-Hospital Service, for the week ended October 9, 1886:*

Beckham, C. T., Passed Assistant Surgeon. Granted leave of absence for thirty days, to take effect when relieved. October 5, 1886.

Kalloch, P. C., Passed Assistant Surgeon. Granted leave of absence for twenty-one days, to take effect when relieved. October 5, 1886.

Pettus, W. J., Assistant Surgeon. To proceed to Evansville, Ind., for temporary duty. October 8, 1886.

Kinyoun, J. J., Assistant Surgeon. Appointed an Assistant Surgeon. October 4, 1886. Assigned to temporary duty at New York, N. Y. October 5, 1886.

Society Meetings for the Coming Week:

- Monday, *October 25th:* New York Surgical Society (in the afternoon); Medical Society of the County of New York; Boston Society for Medical Improvement; Lawrence, Mass., Medical Club (private); Cambridge, Mass., Society for Medical Improvement.
- Tuesday, *October 26th:* New York Academy of Medicine (Section in Laryngology and Rhinology); New York Dermatological Society (private); Buffalo Obstetrical Society (private); Medical Societies of the Counties of Putnam (quarterly), Queens (semi-annual—Garden City), and Rockland (semi-annual), N. Y.; Boston Society of Medical Sciences (private).
- Wednesday, *October 27th:* New York Pathological Society; American Microscopical Society of the City of New York; Medical Society of the County of Albany, N. Y.; Auburn, N. Y., City Medical Association; Philadelphia County Medical Society (conversational); Medical Society of Gloucester County, N. J. (quarterly); Berkshire, Mass. (Pittsfield), and Middlesex, Mass., North District (Lowell) Medical Societies.
- Thursday, *October 28th:* New York Academy of Medicine (Section in Obstetrics and Diseases of Women and Children); New York Orthopædic Society; Brooklyn Pathological Society; Roxbury, Mass., Society for Medical Improvement (private); Massachusetts Medical Benevolent Society (annual—Boston); Cumberland, Me., County Medical Society (Portland); Pathological Society of Philadelphia.

Proceedings of Societies.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Meeting of September 8, 1886.

Dr. Richard J. Levis in the Chair.

Abdominal Section for Pyosalpinx.—Dr. Joseph Price read a paper on this subject. [See page 458.]

Dr. Beates remarked that the series of cases presented by the essayist supplied a subject that should demand a most critical and conscientious scrutiny. First, the fact that six instances of pyosalpinx occurred in a few months in the practice of one gentleman illustrated the frequency with which the affection was met with, and, when we considered that even at this day many men who were regarded as authorities asserted that pyosalpinx was a disease only recognized by Mr. Lawson Tait, the paper of the evening possessed a significance that spoke for itself.

Secondly, a matter that deserved marked emphasis consisted in the fact that in each of these cases gonorrhœa was a proved ætiological factor. Whether or not gonorrhœa was regarded as a specific or non-specific affection did not, the speaker thought, enter into the consideration of the subject, for in a large proportion of the cases reported in London and America the *fact* remained the same that gonorrhœa, in whatever light viewed, had been a direct ætiological factor; and a practical lesson, which the profession should be taught, was that it should in no uncertain voice combat the tendency of the colleges to teach that gonorrhœa was a mere simple urethral catarrh. Gonorrhœa should be treated of as a disease that might be followed by most dire results.

Dr. M. Price said that he had been performing the operation only for the past year and a half; but, looking back during the last fifteen years, he could recall a dozen cases in which life might have been saved by it. The aspirator would do no good in these cases, and would increase the danger. The mortality of the operation was only about three per cent. A woman suffering with this affection was no more a woman, so far as the ovaries were concerned, than she was after their removal.

Dr. J. Price said that he considered it justifiable to do the operation when necessary in alleys or courts, even if the surroundings were insanitary, provided the surgeon was surrounded with proper safeguards. Mr. Tait had had as perfect results in America as at home. While in New York he operated in two cases of pyosalpinx in the presence of eight hundred spectators; both patients recovered. In Albany he did one hysterectomy and one ovariotomy; both patients recovered.

When the tubes or cellular tissue were filled with pus, there was an abscess, and it should be treated as an abscess. Where the abscess could be enucleated, the treatment was perfected and the cure hastened. As a rule, these patients recovered. Where pus was present, delay was fatal to the patient. Under such circumstances operative procedure was indicated. In reference to the diagnosis and treatment of diseases of the tubes and ovaries, the diagnosis was either made or not made. If there was pyosalpinx or cystoma, operation was clearly indicated. Efforts to induce retrograde metamorphosis of the diseased condition of the appendages by general treatment and by operations on a lacerated cervix or perinæum were as futile as frivolous, and the idea could only originate from indecision as to the true condition of things, or from ignorance as to the true pathology of the disease.

Dr. H. F. Formad said that from Dr. Price's able and interesting paper he was surprised to learn that pyosalpinx was rather a new field for study; that it was clinically neglected and ill recognized during life. The speaker did not have a chance or inclination to study pyosalpinx during life, but he fully agreed with Dr. Price that it must be an exceedingly common lesion of women. He had seen a great many cases of both the acute and chronic form of pyosalpinx in his routine autopsies. The chronic form was common in women of the more advanced ages, particularly those who had borne many children; in fact, to find the Fallopian tubes normal as to structure and position was rare in such women. Often one or the other of the tubes was misplaced; sometimes both were bent over and adherent to the posterior part or to the side of the womb by means of inflammatory adhesions. Occasionally the extremities were inseparably glued to the ovaries, or the omentum, bowels, or bladder. In some instances all the pelvic organs were matted together into a nearly solid body by means of huge masses of new-formed connective tissue. He had seen constriction of the bowels that had ensued from such outside pressure. Acute pyosalpinx manifested by purulent infiltration and swelling, and sometimes abscesses, secondary to bad forms of endometritis, and followed by fatal peritonitis, the speaker had seen at autopsies in cases of criminal abortion a number of times in young women.

NEW YORK CLINICAL SOCIETY.

Meeting of September 24, 1886.

The President, Dr. A. A. Smith, in the Chair;
Dr. B. Farquhar Curtis, Secretary.

Fractures at the Elbow in Young Children.—Dr. Robert Abbe brought up this subject, and presented photographs, diagrams, and histories of three cases of well-marked epiphyseal fractures of the os brachii.

Case I.—Five weeks before coming under the speaker's observation a boy five years old had fallen headlong from a wagon, striking with his left elbow under him. An examination under anæsthesia showed marked deformity, with forward prominence of the shaft. The biceps tendon had slipped to the inner side of the shaft. The callus having been broken up by manual force, reduction was effected, and a plaster-of-Paris splint was applied. At the end of three weeks and a half the splint was removed, and the boy was allowed free use of the limb. At the end of six weeks the joint could be moved with the greatest freedom, and there was no appreciable deformity.

Case II.—This was an injury of the same kind, sustained by a boy two years old by falling three steps and striking on his elbow two weeks before the speaker saw him. The same treatment was employed, and at the end of three weeks the position was excellent, and moderate freedom was allowed him.

Case III.—A boy four years old fell from a table. He complained at the time only of his thumb, but subsequently the elbow swelled, and, when the swelling had subsided, a week after the fall, deformity was seen and the boy was brought for treatment. The deformity was the same as in the two other cases. Under anæsthesia, crepitus was detected, and the fracture was regarded as deviating somewhat from the epiphyseal line near the outer condyle. Flexion was abruptly arrested at a right angle, but the power of extension was nearly complete.

The speaker added the following remarks: 1. Epiphyseal and other fractures at the elbow are often treated as sprains and leave impaired joint motion. 2. The deformity is not extreme, being chiefly an antero-posterior thickening above the joint, with rather a full ridge parallel to and just above the flexure-crease. This is the lower edge of the shaft of the os brachii. There is usually no heel-like backward prominence of the elbow, as in dislocations. 3. There is impairment of flexion, but not so much of extension. The elbow can scarcely be bent to a right angle before flexion is stopped abruptly by the overhanging shaft of the os brachii, the lower end of which comes in contact with the radius. 4. Reduction can be accomplished several weeks after the injury, if the deformity is bad enough to call for it. 5. Sufficient manipulation of the parts to break up the callus at a late date is said by some writers to be dangerous to the integrity of the joint; but, while great force is required to loosen the fragments if it is applied so as to flex the elbow forcibly, less is needed to over-extend it, and much less when exerted laterally. Therefore back-and-forth lateral bending, with some over-extension and only occasional violent flexion, succeeds best in freeing the fragments with least risk to the joint. 6. The damage done a child's joint by fracture in its vicinity, leaving it in a state of so-called fibrous ankylosis, is best left to Nature; as the free use of the arm is allowed, usually the mobility will be restored at least as quickly as by frequent passive motion.

Dr. V. P. Gibney had known many cases of osteitis to be considered as old fractures, but he had not so often known of the error spoken of by Dr. Abbe—that of taking fractures for sprains. He thought the use of lateral movements for breaking up the callus a good idea; most important, however, was the testimony that in such cases passive motion could be omitted without fear of ankylosis, and that corresponded with his own experience.

Cocaine in the Treatment of Whooping-cough.—Dr. L. Emmett Holt read a paper on this subject (see page 456).

Dr. Abbe was not surprised at the symptoms of poisoning observed in Dr. Holt's cases, for he had himself experienced restlessness, acceleration of the pulse, etc., from fifteen minims of a four-per-cent. solution taken hypodermically.

Dr. L. Bolton Bangs coincided in the views that had been expressed concerning the danger of cocaine in large doses; twenty-five minims of a four-per-cent. solution, even in the form of spray, was a large dose for an infant. He thought it important to emphasize the dangers of cocaine.

Dr. G. M. Swift remarked that Dr. Blodgett had tried cocaine in the treatment of whooping-cough at the Foundling Hospital very thoroughly, and had seen no good results.

The President had noticed a marked resemblance of the symptoms of cocaine poisoning to those caused by belladonna.

The Local Use of Iron in Chronic Pelvic Inflammation.—Dr. C. D. Scudder spoke of a case in which severe chronic pelvic peritonitis had been cured by local applications of Monsel's solution to the fornix vaginæ. He had tried it with good results in many other cases. His method was to apply the solution, pure or diluted with glycerin, to one or two spots of the size of a half dollar, grading the strength and the extent of the application to the peculiarities of the individual. Usually he aimed to produce a superficial eschar.

Repeated Replacement of the Uterus in Cases of Malposture.—Dr. Scudder also drew attention to the good effects frequently produced in cases of displacement of the uterus by simply replacing the organ, at intervals of from one to four weeks, with the finger. He had had many patients who were perfectly satisfied with this treatment, as it always relieved them of their symptoms for a time.

Retroflexion of the Gravid Uterus.—Dr. Scudder also mentioned a case in which, at the third month of pregnancy, in a woman twenty-three years old, the uterus was so extremely retroflexed that the fundus rested on the floor of the pelvis, just above the anus.

Dr. Bangs had seen a case of displacement of the uterus in which a single replacement with the finger had caused the symptoms to disappear permanently.

Dr. Gibney knew of many cases in which periodical replacement had kept the symptoms in abeyance.

Hyperpyrexia due to Quinine.—Dr. Swift referred to the case of a boy convalescent from malarial fever who, while still taking quinine and having a good appetite and an evening temperature of 99·5° F., had a rise of temperature to 100°. The daily amount of quinine was increased from 7 to 15 grains without reducing the temperature. The boy's stomach failed, and the use of quinine was stopped, when the temperature at once fell to normal. The boy recovered entirely. It seemed as if the quinine had kept up the hyperpyrexia instead of removing it.

Dr. Holt had seen a like case.

Dr. W. H. Katzenbach had in one case given as much as 60 grains of quinine without reducing the temperature, and, when six or seven weeks had been consumed in the vain attempt, the use of quinine was stopped and the fever disappeared at once.

The President related the history of a case of obscure abdominal tumor in a child.

AMERICAN LARYNGOLOGICAL ASSOCIATION.

(Continued.)

Hæmorrhage after Staphylotomy.—The discussion on Dr. Morgan's paper (see page 421) was as follows:

Dr. Hooper: I have never seen a bleeding of more than a few drops follow this operation. I never cut through the muscle; I merely remove the redundant mucous membrane. It is with me, however, an infrequent operation—about once in one hundred and sixty-five cases of throat disease.

Dr. Mackenzie: I can not add much to the admirable historical account given by the author of the paper beyond the fact that a record exists of the operation having been performed long anterior to Hippocrates and his school. I think that there is in the "Ayur-Véda" an account of the removal of the uvula; they certainly had instruments for the removal of the tonsils, which are clearly described. And I think that they also used the same instrument for the removal of the uvula. It is certain, however, that they removed nasal polypi with the forceps.

Dr. De Blois: An anomalous distribution of the arteries has been assigned as a possible cause of hæmorrhage after staphylotomy, and a case has been reported. I do not think that the arteries only are fault. A short time since I saw the two patients whose cases were reported to Dr. Morgan by Dr. Farlow. One was a young girl of sixteen, in whose pharynx the pulsation was noticed, on looking into the throat, behind each posterior pillar of the fauces. The second was a young man, who had a large pulsating artery in the pharynx, involving one side only. It is very curious that both of these patients were seen within a week. Where such a condition of the vessels exists, it is an alarming complication in case of incision for retro-pharyngeal abscess.

Dr. Delavan: I have seen four cases in which this anomalous distribution of the arteries existed, and in all of them it was distinctly marked.

Dr. Frank Donaldson: I was much interested in Dr. Morgan's valuable paper. I am astonished to learn the number of cases of hæmorrhage after the operation. In my own experience I have never seen more than a few drops of blood flow. The necessity seldom exists for cutting off the uvula, and the operation should rarely be done. The popular idea that a relaxed and elongated uvula usually causes a cough is erroneous. The chief inconvenience from it is, that it produces difficulty in deglutition by interfering with the ascent of the soft palate. Moura found, as a result of his investigations, that the uvula was of great service in shutting up the chink in the naso-pharynx during the second period of deglutition. This function may be seriously impaired by its removal. It is very seldom that it is necessary to use the staphylotome, and then only a small portion should be excised. Numerous cases have occurred where the uvula has been much enlarged, but where the swelling has disappeared entirely after astringent treatment. The uvula in rare instances descends over the epiglottis.

Dr. Daly: I hope that Dr. Morgan's paper will be extensively read by the profession, in order to check the tendency of uselessly operating upon the uvula. The aim should be, in any operation, to leave the parts in as nearly a normal condition as possible, and I am, therefore, opposed to a truncate incision in removing the uvula. It should be left in an inverted wedge-shape. I have been very much disgusted with the amount of malpractice which has been perpetrated upon this little organ. In my entire experience of many years of active throat practice I have not found it necessary to amputate the uvula more than three times. That the operation is sometimes necessary I am prepared to admit; but it should be done as rarely as possible. It has been resorted to by practitioners when they did not know what else to do; under such circumstances it is a gross act of malpractice.

Dr. Morgan: In closing this discussion I wish to express my appreciation of the general approval by the members, and the kind words spoken by the president, relative to the worth of my present essay. My investigation of the question of hæmorrhage following staphylotomy, which has consumed fourteen months, was inspired by a desire to ascertain the facts appertaining to this important and interesting matter—facts which have transpired and, for unaccountable reasons, have never been recorded. The development of the subject under systematic methods has astonished me, as it has others, and a mass of valuable material has ultimately been accumulated. In the investigation of the subject I soon found that medical literature, with three notable exceptions, was silent upon and apparently unaware of the occasional occurrence of dangerous bleeding after staphylotomy, and for this reason I was forced to resort to the circular letter. The responses received from home and abroad were general, and nineteen of the twenty-three cases of hæmorrhage collected are for the first time reported to-day. The utmost caution has been exercised in admitting only undoubted instances of uvular hæmorrhage, consequently numerous cases have necessarily been excluded. A colleague sent the history of a patient upon whom he had performed a double amygdalotomy and a staphylotomy at one sitting, and expressed the belief (though not absolutely certain) that the subsequent copious bleeding was from the uvula. For obvious reasons this case has been excluded. I am of the opinion that the errors of omission and commission existing in recent works on diseases of the throat concerning uvular hæmorrhage should be corrected, and the true status of affairs made known. That same scrutiny which has excluded questionable cases from my paper has been exercised in regard to the acceptance of historical writings not duly authenticated, or, in other words, mythical. I do not desire to even disturb the reputation so well deserved by my friend, Dr. Mackenzie, for a knowledge of the antique in laryngology; but I can not adopt as facts the prehistoric and fabulous romances of ancient Indian writers, so vaguely hinted at by Dr. Mackenzie. They have intentionally suffered the fate of exclusion from my literary researches, which cover the period from 400 B. C. to January, 1886, A. D. In the preparation of this paper I have first had regard and respect for the practical in medicine, and subsequently have given what might be considered a fairly exhaustive historical and literary finish. The work has been laborious beyond expectation, and it could never have assumed such proportions but for the unrivaled facilities offered to me by the library of the Surgeon-General's Office. Again, I wish to pay tribute to this library, and to its obliging and accomplished officers.

(To be continued.)

Book Notices.

A Treatise on Asiatic Cholera, edited and prepared by Edmund C. Wendt, M. D., Curator and Pathologist of the St. Francis Hospital, etc., in Association with Drs. John C. Peters, of New York, Ely McClellan, U. S. A., John B. Hamilton, Surgeon-General, U. S. Marine-Hospital Service, and George M. Sternberg, U. S. A. Illustrated with Maps and Engravings. New York: William Wood & Co., 1885. Pp. v–403.

The editor has every reason for feeling satisfied with the result of his own work and that of his able collaborators. Aside from the scientific value of the articles, the style in which they are written is so clear that they furnish interesting reading for the laity as well as for physicians. Although, as the editor modestly remarks in his preface, he does not "lay claim to any originality," his task has none the less been one which required extended research and a judicious summarizing of the results of a large number of observers. That he has omitted nothing of importance, and yet has preserved his book from being a collection of mere dry condensed statements without sequence, is sufficient evidence of his success. He has certainly made it a thoroughly American work.

The plan of the book is a good one. It is divided into seven parts, the first containing an exhaustive historical sketch of the disease, the second treating of the ætiology, the third and fourth of the symptomatology, course, and morbid anatomy, the fifth of diagnosis, including bacterioscopy, the sixth of prophylaxis, and the last of treatment.

The name of Dr. Peters is so well known in connection with epidemiology that it is unnecessary to add that his work has been thoroughly done. He contributes the first section of Part I, including some valuable maps. Although his space is limited and the subject-matter is necessarily condensed, these eleven chapters are among the most interesting in the volume and show a large amount of research.

Dr. McClellan writes on the history of the disease as it has occurred in the United States army, his object being to demonstrate "the fact that epidemic cholera will develop at any locality to which the specific poison of the disease may be carried, and *in which it finds a suitable hot-bed for its proliferation.*" The editor contributes Part II to Part V, inclusive (pages 119 to 311). In Chapters XVIII to XXVII he enters into an elaborate discussion of the various theories concerning the nature of cholera, due attention being paid to the views of American physicians. Chapter XXI is devoted to Koch's doctrine, and Chapter XXIV to Emmerich's microbe and the observations which have been published in favor of and against Koch's theory. On page 215 the editor formulates his own opinions with regard to the nature and transmission of the disease, avowing himself a believer in the specific character of the comma bacillus. Chapters XXVII to XXXIII contain a clear, practical statement of the symptomatology, course, complications, and sequelæ of the disease, enriched by copious references to foreign writers. The reader can not fail to approve of the thorough manner in which this branch of the subject is treated. Each paragraph is complete in itself, the writer finishing what he has to say on one topic before he proceeds to another. The section on pathological anatomy and histology is rather condensed, but is sufficiently exhaustive for a popular treatise. Chapter XXXVII presents a short description of the methods of cultivating and examining bacteria as now practiced.

Part VI, on "The Prevention of Cholera," consists of three sections, a short one by Dr. Sternberg on "The Destruction of Cholera Germs," in which he discusses "external" and "internal" disinfection. He is not enthusiastic regarding the latter practice, which he considers as simply a "clinical experiment."

Chapter XLI, on prophylaxis in civil life, is short, but very much to the point.

A few pages on "Cholera Hygiene as applied to Military Life" are followed by the concluding section on treatment, which is also contributed by the editor and contains all of the results of modern clinical observations, including the experiments of Ferrán.

In reviewing this work as a whole, the reader will be rather struck by its inequality. In spite of this fault, we have no hesitation in commending the book as a very useful one for the American reader.

Monthly Nursing. By A. Worcester, A. M., M. D., Fellow of the Massachusetts Medical Society. Boston: D. W. Mason, 1886. Pp. vi–9 to 250. [Price, $1.25.]

The style of this book is attractive, and the reader becomes convinced that the author has made good use of an obstetrical experience and of an acquaintance with the needs of nurses. Good judgment is shown in the selection of the subject-matter, and sound views are expressed in language adequate to the comprehension of any nurse of ordinary intelligence. The book could be read to advantage by every young practitioner of medicine also, by whom the details of nursing should be fully known. Whether he is called upon to perform them by the unexpected absence of the nurse, or is supervising them, he should equally know what to direct, and, in minute detail, how it is to be done. All this is discussed in a way that no general text-book has room for.

In the opening chapter the requirements of the lying-in room are perhaps a little overstated, yet this is a good fault, and, when circumstances will permit all of these to be observed, the accoucheur will indeed feel that he is well fortified. The directions given regarding measures to be observed during the course of the various stages of labor are excellent and very clear. Inasmuch as in this country it is common to permit delivery while the patient is on the back, it is a mistake to have directions given regarding the management of the patient upon the side only. The author wisely refrains from instructions upon the care of the perinæum, except the simple advice to allow time for its gradual distension by reasonable upward pressure on the child's head when it is advancing too fast. He advises stripping the cord "*of blood*" before tying. This can not be done, though the procedure is proper for the purpose of removing the Whartonian jelly. We should have the binder reach well above the navel of the mother, which is higher than the author advises.

In considering the lying-in month, the duties which promote the most cheerful and healthy state of the patient's mind are made very clear.

Everywhere what the nurse may *not* do is pointed out, as well as what is her duty, and a careful distinction is made between the duties proper in the absence of physician and those to be performed when the latter is responsible by his presence. Diagrams would have assisted in rendering the subject of parturition clear, and more systematic paragraphing, with an occasional table of classification, would have aided in clearing up some of the more confusing subjects.

The reviewer believes that an intelligent and *conscientious* nurse can not know too much in anything pertaining to the healing art. A nurse can not attain the highest skill in performing any nursing duty unless she understands why she is doing it. Failure upon the part of a "trained nurse" is the fault of the individual rather than of the system of education, as a rule, and the failure would have been even greater without it. We heartily approve of the scope of this book, and believe that it will help to qualify the nurse to "do the right thing without being asked," thus "making her a treasure."

Hunterian Lectures on some of the Injuries and Diseases of the Neck and Head, the Genito-urinary Organs, and the Rectum. Delivered before the Royal College of Surgeons of England, June, 1885, by Edward Lund, F. R. C. S., etc. London: J. & A. Churchill, 1886. Pp. 116.

These lectures are rather pleasant talks upon some minor surgical operations about the parts indicated; and, although agreeable reading for an hour or two, are a little disappointing. The American reader has been led to expect something of at least hard work if not of originality in the Hunterian lectures, but we fail to see evidences of either in the little book before us. In the chapter devoted to the neck and head, the subjects touched upon are wounds of the face, burns, hare-lip, and excision of the tonsils. The second part deals with retention of urine and foreign bodies, and the third with fistula and hæmorrhoids. Upon all these subjects the author has something good to say and some instructive histories of cases to record.

Fractures and Dislocations. By T. Pickering Pick, F. R. C. S., etc. Illustrated with Ninety-three Engravings. Philadelphia: Lea Brothers & Co. Pp. viii–524.

This is one of the series of clinical manuals in blue covers. Although not perhaps quite so valuable as some of the others, the set loses nothing by its publication. It deals with the "various common fractures and dislocations," and perhaps for this reason those of the spine have been omitted; but fractures of the skull are certainly common enough to have been included, though the author limits himself in this chapter to the face and neck. In fact, whatever faults the work possesses are those of omission. The treatment of fractured patella by suture is passed over with simple disapproval but without argument, and, in many other cases, procedures which are of recognized utility are not mentioned at all. There is also an absence of minute and detailed description as to methods of treatment which greatly lessens the value of the work for both students and practitioners. The reader is told what to do, but seldom how to do it. This may have been necessary on account of the limited space at the author's command. In short, the book is a concise statement of the writer's views and practice in this branch of surgery; and, as his experience has been great, it is necessarily both instructive and interesting.

Helps to Health: the Habitation, the Nursery, the School-room, and the Person, with a Chapter on Pleasure and Health Resorts. By Henry C. Burdett, Founder of the Home Hospitals Association for Paying Patients, etc. With Nineteen Illustrations. London: Kegan Paul, Trench, & Co., 1885. Pp. x–249.

The elementary teachings of this little book are generally to be commended for accuracy of information and common sense in interpretation, avoiding the too prevalent doctrinarianism which makes pathogenic mountains out of sanitary mole-hills, and inculcating only those rules of health which can be practically carried out by the average occupiers of average habitations. The remarks upon the hygiene of infancy and school life, bathing, and the effects of alcoholic drinks, are examples of this unemotional judgment, and would afford profitable reading to many preachers and legislators, as well as to parents and teachers. The principal drawback to this, as to several excellent similar works which come to us from the other side of the ocean, is that most of its advice, and all of its references to legal obligations, pertain to the climate and statutes of England. For this reason, the author's recommendations as to methods of household sanitary engineering and warming appliances need considerable modification to be applicable to North American winters, and his chapters on Pleasure and Health Resorts, and on Sanitary Jurisprudence (with a directory of local inspectors), will be caviare to the cisatlantic reader.

A Manual of Operative Surgery. By Lewis A. Stimson, B. A., M. D., etc. Second Edition, with Three Hundred and Forty-two Illustrations. Philadelphia: Lea Brothers & Co., 1885. Pp. xxiv–506.

In this volume much has been added to the previous edition, particularly the article on "Antiseptic Treatment of Surgical Wounds"; and the chapters on "Excision of Joints and Bones" and "Operations performed upon the Stomach, Abdominal Wall, and Intestines." These additions have been well done and enhance the value of the book. The methods and procedures are clearly and succinctly described. The illustrations are numerous and the typography is excellent. We congratulate the author upon his work, and feel that it will meet with the favorable reception it deserves.

GENERAL LITERARY NOTES.

Among recent foreign publications we note the following:

G. Bell & Sons, London.—W. Sharp, "Therapeutics founded on Antipraxy." (6*s.*)

J. & A. Churchill, London.—"Guy's Hospital Reports," xliii. (7*s.* 6*d.*)

W. & A. K. Johnston, Edinburgh.—D. B. Hart and A. H. F. Barbour, "Manual of Gynæcology," 3d ed. (25*s.*)

H. K. Lewis, London.—Roberts, "Hand-book of Medicine," 6th ed. (21*s.*)

Oliver & Boyd, Edinburgh.—"Transactions of the Medico-chirurgical Society of Edinburgh," iv. (8*s.* 6*d.*) —— "Transactions of the Edinburgh Obstetrical Society," 1884–'85. (7*s.* 6*d.*)

Y. J. Pentland, Edinburgh.—E. Landolt, "The Refraction and Accommodation of the Eye, and their Anomalies," transl. by C. M. Culver. (30*s.*) —— P. Schech, "Diseases of the Mouth, Throat, and Nose," transl. by R. H. Blaikie. (9*s.*) —— G. S. Woodhead, "Pathological Mycology." (8*s.* 6*d.*) —— R. S. Aitchison, "Synopsis of Therapeutics." (3*s.*)

Smith, Elder, & Co., London.—J. Finlayson, "Clinical Manual for the Study of Medical Cases," 2d ed. (12*s.* 6*d.*) —— W. S. Playfair, "Treatise on the Science and Practice of Midwifery," 6th ed. (28*s.*)

F. Alcan, Paris.—E. Duponchel, "L'hystérie dans l'armée."

J. B. Baillière et Fils, Paris.—Lanoaille de Lachèse, "Troubles de l'âme et du corps chez l'homme dans les temps modernes et dans l'histoire." (1*fr.* 50.)

Georges Carré, Paris.—A. Eternod, "Guide technique du laboratoire d'histologie," etc. (3*fr.* 75.) —— F. Gomez de la Mata, "Études thérapeutiques des médicaments modernes," transl. by A. Delétrez. (3*fr.*) —— S. Laskowski, "L'embaumement." (4*fr.*) —— G. Quivogne, "De la chloroformisation." (2*fr.*)

G. Masson, Paris.—Duboué, "De l'emploi et de l'efficacité du tannin," etc. (2*fr.* 50.) —— Richelot, "Traitement de l'engorgement du col utérin par les cautérisations avec le caustique Filhos." (2*fr.* 50.) —— G. Masson, "Mémoires de chirurgie," iv. (15*fr.*)

Bureaux du "Progrès Médical," Paris.—Raison, "Du traitement des phénomènes douloureux de l'ataxie locomotrice progressive par les pulvérisations d'éther et de chlorure de méthyle." (2*fr.* 50.)

F. Enke, Stuttgart.—M. Braun, "Das zootomische Practicum." (7*M.*) —— T. Escherich, "Die Darmbakterien des Säuglings." (6*M.*)

H. Friedländer & Sohn, Berlin.—L. Oerley, "Die Rhabditiden und ihre medicinische Bedeutung." (8*M.*)

A. Hirschwald, Berlin.—"Charité-annalen," xi. (20*M.*)

G. Reimer, Berlin.—J. Mayer, "Ueber den Werth und die Resultate der verschiedenen Entfettungsmethoden." (80*Pf.*)

F. C. W. Vogel, Leipsic.—E. Lesser, "Lehrbuch der Haut- und Geschlechts-krankheiten," 2d ed., 2d part. (6*M.*) —— W. Moldenhauer, "Die Krankheiten der Nasenhöhlen." (5*M.*)

F. Vallardi, Milan.—S. Plevani, "Manuale pratico di farmacia e dei nuovi rimedi," 2d ed. (15*l.*)

Espasa y Ca., Barcelona.—L. De Castellarnau, "Tratado Completo de Hidroterapia." (8*pes.*)

"Revista de Medicina y Cirujía Prácticas," Madrid.—Olavide, "Album Clínico de Dermatología." (110*pes.*)

BOOKS AND PAMPHLETS RECEIVED.

Method of Managing Typhoid Fever. By F. Peyre Porcher, M. D., Charleston, S. C. [Reprinted from the "Transactions of the Association of American Physicians."]

A Laboratory Guide in Urinalysis and Toxicology. By R. A. Witthaus, A. M., M. D., Professor of Chemistry and Physics in the Medical Department of the University of the City of New York, etc. New York: William Wood & Company, 1886. Pp. 75.

A Manual of Animal Vaccination, preceded by Considerations on Vaccination in General. By Dr. E. Warlomont, Member of the Royal Academy of Medicine of Belgium, etc. Translated and Edited by Arthur J. Harries, M. D., etc. With an Appendix showing the Results of Revaccination and the Comparative Utility of Animal Vaccine. Philadelphia: John Wyeth & Brother, 1886.

Two Rare Cases of Abdominal Injury. By J. A. Stucky, M. D., Lexington, Ky. [Reprinted from the "Medical Record."]

The Exploration, Excavation, and Illumination of the Interior of Bones in any Part of the Body. By Milton Josiah Roberts, M. D., etc.

The Treatment of Uterine Flexions. By Virgil O. Hardon, M. D., Atlanta, Ga. [Reprinted from the "Atlanta Medical and Surgical Journal."]

Therapeutic Methods. An Outline of Principles observed in the Art of Healing. By Jabez P. Dake, A. M., M. D., late Professor of the Principles and Practice of Medicine in the Hahnemann Medical College, Philadelphia, etc. Boston and Providence: Otis Clapp & Son, 1886. Pp. 12, 15 to 195.

Is Electrolysis a Failure in the Treatment of Urethral Strictures? By Robert Newman, M. D., New York. [Reprinted from the "Medical Record."]

Rupture of the Uterus during Pregnancy; Porro's Operation; Cure. Translated by Robert T. Wilson, M. D., Baltimore, and Clara S. Harvey, A. R. C. P., England. [Reprinted from the "Virginia Medical Monthly."]

Report of the Trustees of the Newport Hospital, presented to the Corporation at their Thirteenth Annual Meeting, July 20, 1886.

Reports on the Progress of Medicine.

OPHTHALMOLOGY.

By CHARLES STEDMAN BULL, A. M., M. D.

Erythropsia.—Szili tries his hand at an elucidation of this perplexing question ("Kl. Monatsbl. f. Augenheilk.," July, 1886). In cases where an iridectomy has been done, as in the extraction of cataract, one question to be considered is, whether the incident light passing through a wide coloboma, or through a dilated pupil, or badly centered in consequence of irregular refraction, and dispersed by reflexion from the interior of the eye, is not thus colored excessively red. Another important fact mentioned by Szili is the appearance of red-vision in so many cases in the visual field of one eye to such an extent that it fills the entire field, while the visual field of the other eye remains intact. In such a case it is difficult to fix the cause of the erythropsia in some lesion of the visual center, for it would be necessary to assume the central lesion as a bilateral, homonymous, and totally divided lesion. If this can not be done, then the seat of the lesion must be peripheral. The one fact that unilateral erythropsia teaches is, that we can not be forced to locate the lesion in the visual center. This simplifies the enigma, but by no means solves it.

Paralyses of the Ocular Muscles after Diphtheria.—Remak's paper is full of interesting facts, based on an examination of one hundred cases taken from Hirschberg's clinic ("Centralbl. f. prakt. Augenheilk.," June, 1886). One supposition, which has been rendered strongly probable, is, that paralysis of accommodation may be caused by a simple angina. Very often the diphtheritic affection of the throat has been a very serious one, while the paresis of accommodation following it is but very slight. The reverse also holds good, for many cases of most pronounced paralysis of accommodation have been known to follow slight attacks of angina. It is Szili's opinion that paralyses of the extrinsic ocular muscles are by no means rare in connection with paralysis of accommodation, especially paralysis of the abducens. He thinks every case should be carefully tested for homonymous diplopia with a red glass before one eye, though he admits that concomitant convergent squint is a very rare result. The diminution of vision which is sometimes met with, and which is not due to an uncorrected astigmatism, Szili thinks may be explained in one of two ways: 1. By the very little practice these very young patients have in reading. 2. By the possibility that the conditions of physiological astigmatism are materially altered by the chronic tension of the zonule in paralysis of the ciliary muscle.

On Means for the Prevention of Myopia.—Priestley Smith's paper ("Ophth. Review," June, 1886) is purely practical, and concerns itself with the school-years of children. He mentions the following as recognized essentials: 1. The seat must be of such height as will allow the scholar's feet to rest flat on the floor or foot-board, and broad enough to support the greater part of the thigh. 2. The seat must have a back placed at such height as to fit the hollow of the back below the shoulder-blades, and support the body in a vertical position. 3. The near edge of the desk must be just so high above the seat that when the scholar sits square and upright, with elbows to the sides, the hand and forearm may rest upon the desk without pushing up the shoulder. 4. As used in writing, the desk must have a slope of 10° to 15°; as used in reading, it must support the book at an angle of about 45°, and at a distance of at least twelve inches from the eyes. 5. As used in writing, the edge of the desk must overhang the edge of the seat by an inch or two, in order that the scholar shall not need to stoop forward, and that the support to the back may be maintained. 6. Either the desk or the seat, or some part thereof, must be movable at pleasure, so that, although the desk usually overhangs the seat, the scholar may be able at any time to stand upright in his place. 7. The desks and seats must be of various sizes, in order that the foregoing conditions may hold good for scholars of various ages.

The Treatment of Ptosis.—Dianoux ("Annales d'oculist.," May–June, 1886) criticises the various operations that have recently been suggested for the relief of ptosis. De Wecker's operation differs from Drausart's only in the excision of a cutaneous flap, which he thinks is unjustifiable, for it only diminishes the palpebral fold and is a bloody operation. Meyer's operation has the same objections as De Wecker's. Panas's operation is considered by Dianoux as a step backward. It replaces four solid fibrous cords with a contracting tendency by a flap of skin without any such tendency, but which, on the contrary, tends to stretch. It really consists in excising a larger or smaller flap of skin from the lid, and tends to cause a disappearance of the transverse fold. It also leaves at the angles of the incision two little projections or buttons, which do not look well. In regard to Mitry's plan of operation, the cicatricial cords do act more favorably as a form of traction in the direction of the occipito-frontalis, but they do so act by diminishing the height of the lid, and this may end in depriving the eye of a part of its necessary protection. Moreover, the operation will not succeed unless the patient is accustomed to make use of the occipito-frontalis. Finally, he prefers Drausart's operation, as offering the best results thus far. He considers that young children should not have the operation done upon them.

Late Ocular Symptoms of Syphilis and their Treatment.—Abadie ("Annales d'oculist.," May–June, 1886) again urges the advantages of his method of subcutaneous injections of mercuric bichloride in the late ocular lesions of acquired syphilis and constitutional syphilis. These lesions are characterized by their complex nature and the slowness of their evolution. Chorio-retinitis is frequently accompanied by chronic iritis, and even by parenchymatous keratitis. Many of these cases heal spontaneously without treatment, while others show a very disquieting tenacity, which resists all treatment until the hypodermic mercurial injections are employed. This latter method of treatment gives good results also in certain forms of chorio-retinitis limited to the region of the macula. In cases of isolated paralyses of the cranial nerves or twigs of nerves, without cerebral complications, the extreme rebelliousness of the trouble is successfully conquered by the hypodermic method of treatment. For this purpose Abadie employs a solution of mercuric bichloride, 1 part; sodium chloride, 2 parts; and distilled water, 100 parts. He injects, on alternate days, 20 drops of the solution beneath the skin of the back, and makes gentle massage over the spot afterward.

Dermoid Cyst of the Internal Orbital Region.—Polaillon ("Recueil d'ophtal.," June, 1886) reports one of these and other cases occurring in a young child of nine years. These cysts at the internal angle of the orbit originate in the same way as those at the external angle, and seem to be formed by an abnormal pinching-up of a cutaneous *cul-de-sac* between the skull and the frontal bud or projection which forms the nose. The relative frequency of these two varieties of cysts is explained by the different period at which the union or suture of the various parts takes place. The union or blending of the frontal bud occurs earlier than that which closes the orbit externally, and hence it is less exposed to the development of an anomaly or a congenital lesion.

The cyst was removed through an incision two centimetres long, running obliquely from above downward, and from without inward. The cyst-wall was opened in the operation, and the contents proved to be sebaceous. Part of the cyst-wall was found firmly adherent to the bone, deep within the orbit, and was not removed, but was destroyed by a sharp curette. The wound was closed with two sutures, and antiseptic dressings were applied. The patient was discharged on the ninth day.

The Treatment of Conical Staphyloma by Excision of a Semilunar Flap from the Cornea.—Galezowski (*ibid.*) recommends this form of operation as the best. The instillation of atropine should be carefully avoided, and eserine or pilocarpine used instead. One of the essential conditions of success of the operation is the maintenance of the bandage over both eyes, without opening the lids, for eight or ten days. This prevents the evacuation of the aqueous humor, if the coaptation of the lips of the wounds has not been perfect or complete, until union has taken place. The occurrence of anterior synechiæ is thus also avoided. After the eighth day the eye not operated on may be left open, but the other eye is better kept closed for twelve or fifteen days. The patient must remain as motionless as possible during the first five or six days after the operation. If the patient complains of itching, or pricking, or shooting pains in the eye, the bandage may be removed and a solution of corrosive sublimate allowed to run over the closed lids, but on no account are the lids to be opened.

Double Exophthalmos, due to a Circumscribed Acute Myelitis.—Deeren (*ibid.*) reports an interesting case of this nature in a man, aged thirty-two, of nervous temperament and very anæmic. The protrusion of the eyeballs appeared coincidently with the disordered movements of the heart and with the occurrence of a painful point or region in the spine which extended from the seventh cervical to the fifth dorsal vertebra. During the first few days the patient had several slight chills and a very marked weakness of the lower extremities. There was no anal or vesical paralysis, and there were no shooting pains in the extremities. Vision of each eye was normal, and the field of vision and the color sense were both intact. Both pupils were of the same size and reaction. There was slight divergence of the right eye. The blood-vessels of the ocular conjunctiva and *culs-de-sac* were enormously dilated. The eyelids could only with great difficulty be closed over the eyeballs. There was no enlargement of the thyreoid gland. There was a myelitis involving those regions of the cord in which the optico-ciliary and cardiac centers are situated.

Wounds of the Ciliary Region.—In considering the subject of wounds of the ciliary region, Van Moll ("Kl. Mon. f. Aug.," August, 1866) has given special attention to the effect of sutures. He soon came to the conclusion that they were not necessary, and he then endeavored to discover whether they had any real advantage, and whether there were any better results following their use. He found that, while cicatrization occurred more quickly when sutures were used, the wound was not always free from irritation. He thinks that manipulation of all wounds where there is prolapse of the vitreous, and where there is danger of dislocating or injuring the lens or other parts, should be carefully avoided, except where such manipulations are absolutely necessary for the proper coaptation of the lips of the wound, and this can often be done without the aid of sutures. For the same reasons he deprecates the primary excision of prolapsed iris, and prefers to wait until some cicatrization of the wound has begun. If sutures must be used, one or two stitches in the conjunctiva are all-sufficient.

Rheumatic Dental Neuralgia as a Possible Cause of Glaucoma.—Crenicean reports (*ibid.*) an interesting case in which violent pain in the teeth preceded an attack of glaucoma. The patient was a man, aged sixty-four, of extremely nervous constitution, who was attacked in the night by a violent pain in one of the left lower molars. The pain extended all over the left side of the face as far as the ear. The next day the pain was less, but in the following night it again increased and extended to the right side of the face and right eye. The left eye had been sightless and phthisical from childhood. When Professor Schulek saw the patient there was a typical attack of inflammatory glaucoma in the right eye, and vision was reduced to counting fingers at two metres. After a preliminary paracentesis of the cornea and the use of pilocarpine for two days, an iridectomy was done, and moderate compression made to prevent if possible any intra-ocular hæmorrhage. On the third day the wound was closed, but on the following night the pain suddenly recurred with great severity, and extensive intra-ocular hæmorrhage occurred. One month after the first attack of pain the patient returned home, with the blood partially absorbed, but with vision reduced to quantitative perception of light.

The Different Varieties of Herpes Corneæ and of Herpetic Ulcus Rodens.—Galezowski ("Recueil d'ophtal.," July, 1886) draws the following conclusions from his observations upon the ætiology and pathogeny of the disease: 1. Herpes corneæ may be caused by any variety of general fever, such as gastric, eruptive, intermittent, or that which accompanies pneumonia. 2. Febrile herpes corneæ is the result of anæsthesia of the trophic corneal nerves throughout a greater or less extent of this membrane. 3. Rodent ulcer of the cornea is only a later evolution of febrile herpes, an aggravated form, infected by the microbes of the same ulceration. 4. Cauterization of the cornea with silver nitrate or the thermo-cautery stops the progress of the disease very rapidly, and re-establishes the functions of the cornea.

Inflammation of both Lacrymal Glands.—Galezowski (*ibid.*) reports an interesting case of this nature occurring in a woman aged forty. The disease began with an intense conjunctivitis, which was soon followed by such extreme swelling of the eyelids that the case looked like one of purulent ophthalmia. There was at first a profuse muco-purulent secretion, with intense serous chemosis. The case had been preceded by dental neuralgia. About the fifth day there appeared a very distinct hardness at the external angle of the lids, which was diagnosticated as an elastic, immovable tumor, which could be traced beneath the orbital margin, and was recognized as an inflamed lacrymal gland. The external application of tincture of iodine and the internal administration of potassium iodide in doses of thirty grains daily caused an entire cure of the disease in one week.

Dermoid Cyst of the Tail of the Eyebrow.—Le Fort, in considering the pathogeny of these cysts (*ibid.*), draws the following conclusions: A study of their pathological anatomy determines the existence of an envelope presenting all the characteristics of the derma, and having internal epithelial lining like the epidermis, and forming a very vascular pocket with hairs, sudoriparous glands, and sometimes epidermal lamellæ which have undergone an anomalous evolution. These cystic tumors exist from birth, but, as their evolution is slow, they are not usually observed until the seventh or eighth year, and rarely grow much until the fourteenth or fifteenth year, or at about the period when the hairy system begins to develop. Their volume varies within wide limits. They are usually firmly adherent to the parts beneath at some part of their circumference. Hence they should be removed entire for fear of a return.

A Refraction Ophthalmoscope with Electric Light.—Juler (*ibid.*) has devised an ophthalmoscope to be used with the electric light. It contains nine convex spherical lenses and fifteen concave spherical lenses, arranged in a single disc. The convex lenses consist of 1, 2, 3, 4, 5, 6, 7, 12, and 20 dioptries, and the concave of 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 12, 14, 16, 20, and 30 dioptries. The disc containing the lenses is made to revolve by means of a second cogged disc. The special apparatus for the electric light consists of a little lamp, which is fixed directly beneath a small concave mirror. The necessary galvanic current is supplied by a Leclanché battery, which, however, may be replaced by any other variety of battery. The mirror is immovable. With this instrument the fundus of an eye may be examined in daylight, as the intensity of the illumination may be regulated at will.

Diabetes in Private Ophthalmic Practice.—Hirschberg ("Centrlbl. f. prakt. Aug.," July, 1886) remarks upon the much greater frequency of diabetes in private than in hospital ophthalmic practice: Out of a total of 1,638 private patients there were 17 suffering from diabetes, while, among about 10,000 hospital patients, there was a very much smaller number. The most frequent ocular complication which has been noticed is the visual disturbance caused by paresis or limitation of accommodation. Diabetic cataracts are especially characterized by steel-blue, broad cortical opacities, which develop very rapidly, especially in cases in which the urine contains a large amount of sugar. Hirschberg regards diabetic retinitis of the non-hæmorrhagic variety as a very rare disease. The amblyopia due to diabetes is always of unfavorable prognosis. The diplopia occurring in the course of diabetes is usually due to paralysis of the abducens.

Acute Glaucoma induced by the Local Application of Cocaine.—Chisolm ("Amer. Jour. of Ophth.," August, 1886) reports a case of this kind occurring in a man aged forty-eight. He had been operated on in both eyes by iridectomy fifteen months previously. He was under treatment for a catarrhal ophthalmia by silver nitrate and zinc sulphate, and cocaine, in a 4-per-cent. solution, was instilled to lessen the pain of the caustic application. Within an hour of the second application the eye became very painful, vision was reduced to counting fingers at two feet, and the tension was above normal. The patient had myopic astigmatism and was presbyopic, but had had normal vision with either eye before the cocaine was employed. Leeches, cold cloths, and eserine in a few hours dispersed all the symptoms, and vision was again restored to the normal standard.

The Action of Silver Nitrate on the Cornea.—Crozat ("Thèse de Lyon," 1886) draws the following conclusions from his observations: 1. Collyria penetrate directly into the cornea, following a centripetal current. 2. Certain lesions of the cornea—keratitis, ulcers, old leucomata in a state of inflammation—have a tendency to render the intra-corneal current slower, and an increase of intra-ocular tension arrests it completely. 3. A solution of silver nitrate penetrates the cornea directly, and follows a centripetal direction. 4. It causes black opacities of metallic silver or suboxide, due to reduction by light—a reduction similar to that which occurs in photographic plates. 5. The sepia-black or straw-yellow opacity produced by silver sulphate in the cornea is due to the action of light alone, and not to the addition of laudanum to the collyria. 6. Acute affections of the cornea and experimental glaucoma act as obstacles to the penetration of collyria, and hence prevent the formation of leucomata due to the precipitated silver. 7. Hence nitrate-of-silver solutions should be used only in those cases in which a condition of hypertonus is present. 8. Keep the patient as much as possible in the dark. 9. Always neutralize the collyrium with chloride of sodium.

(*To be concluded.*)

Miscellany.

The Alpha Syringe.—We have examined one of the alpha syringes, made by Messrs. Parker, Stearns, & Co., of New York, and find that it seems to possess a number of distinct advantages. By the ingenious device of making the delivery pipe distensible a continuous flow is accomplished, and that is to be preferred under some circumstances to the intermittent jet. The weight for sinking the suction pipe is covered with rubber, so that there is no corrosion of metal. The alpha syringe has also the advantage, by no means trivial in the case of nervous patients, of working noiselessly.

The London Hospital Sunday Fund, we learn from the "British Medical Journal," has already reached to more than £40,000. Fifty-four churches and chapels are yet to turn in their collections, and a sum bequeathed by the late Dr. Wakley is to be received.

The Washington Obstetrical and Gynæcological Society recently chose its officers for the ensuing year as follows: President, Dr. A. F. A. King; vice-presidents, Dr. S. C. Busey and Dr. W. W. Johnston; recording secretary, Dr. H. M. Cutts; corresponding secretary, Dr. S. S. Adams; treasurer, Dr. G. Byrd Harrison.

The Lenox Medical and Surgical Society.—At the annual meeting, held on Monday evening, the 11th inst., officers for the ensuing year were elected as follows: President, Dr. W. A. Hume; vice-president, Dr. J. Blake White; secretary and treasurer, Dr. H. B. Conrad.

Spurious Bromidia.—The manufacturers of bromidia, Messrs. Battle & Co., of St. Louis, have received a letter from Dr. George Springer, of Van Buren, Ohio, in which he says:

"Gentlemen: In the case of insomnia which I reported to you in May last, and wherein it required seven drachm doses (hourly, one drachm) to produce sleep by bromidia bought at a pharmacy in Findlay, it required but one drachm, repeated in *one* hour, to produce a good night's rest, of the sample bottle you sent me. I also use the bromidia (Battle & Co.) with the best results in cholera infantum, and in hysteria. Am satisfied that the article bought at Findlay was spurious."

Pneumatic Differentiation.—The Pneumatic Cabinet Company, which has hitherto leased its cabinets at an annual rental, has concluded to offer them for sale. It considers the safeguards that seemed requisite during the experimental period no longer necessary, as the results that have been obtained by the employment of cabinets in the treatment of pulmonary disease seem to warrant the company in offering them without restrictions to any careful practitioner. We understand that the company has entered suit, upon the ground of infringement, against another manufacturer of pneumatic cabinets, and that it purposes suing all physicians who use the cabinets of that manufacturer.

The New York Academy of Medicine.—The Section in Laryngology and Rhinology will meet on Tuesday evening, the 26th inst.

The Section in Obstetrics and Diseases of Women and Children will meet on Thursday evening, the 28th inst. The subjects announced are: "Maternal Nursing—its Influence in Preventing Disease of the Pelvic Viscera," and "Wet-nursing—its Influence in Increasing Infant Mortality," by Dr. Joseph E. Winters.

The Boston City Hospital.—The trustees have declined to grant the petition of Charles G. Wood and others asking that homœopathic treatment may be furnished for those who prefer it. The refusal is made on the ground that it would increase the running expense of the hospital and lead to an impaired service. In reference to the admission of female students to the operations, the trustees have decided that operations in the amphitheatre shall be open, under reasonable regulations, to all students of medicine of one year's standing of duly incorporated colleges, provided, however, that the attending surgeon may always reserve such cases as he considers improper for operation in the presence of a mixed class for private operation.

A Hospital for Epileptics was recently dedicated at Baldwinsville Mass. The building, which cost about $5,000, contains fourteen rooms for patients, and will be devoted to the treatment of epileptic children. Dr. George Jewett, of Fitchburg, Dr. Ira Russell, of Winchendon, and Dr. Thomas H. Gage, of Worcester, delivered addresses appropriate to the occasion.

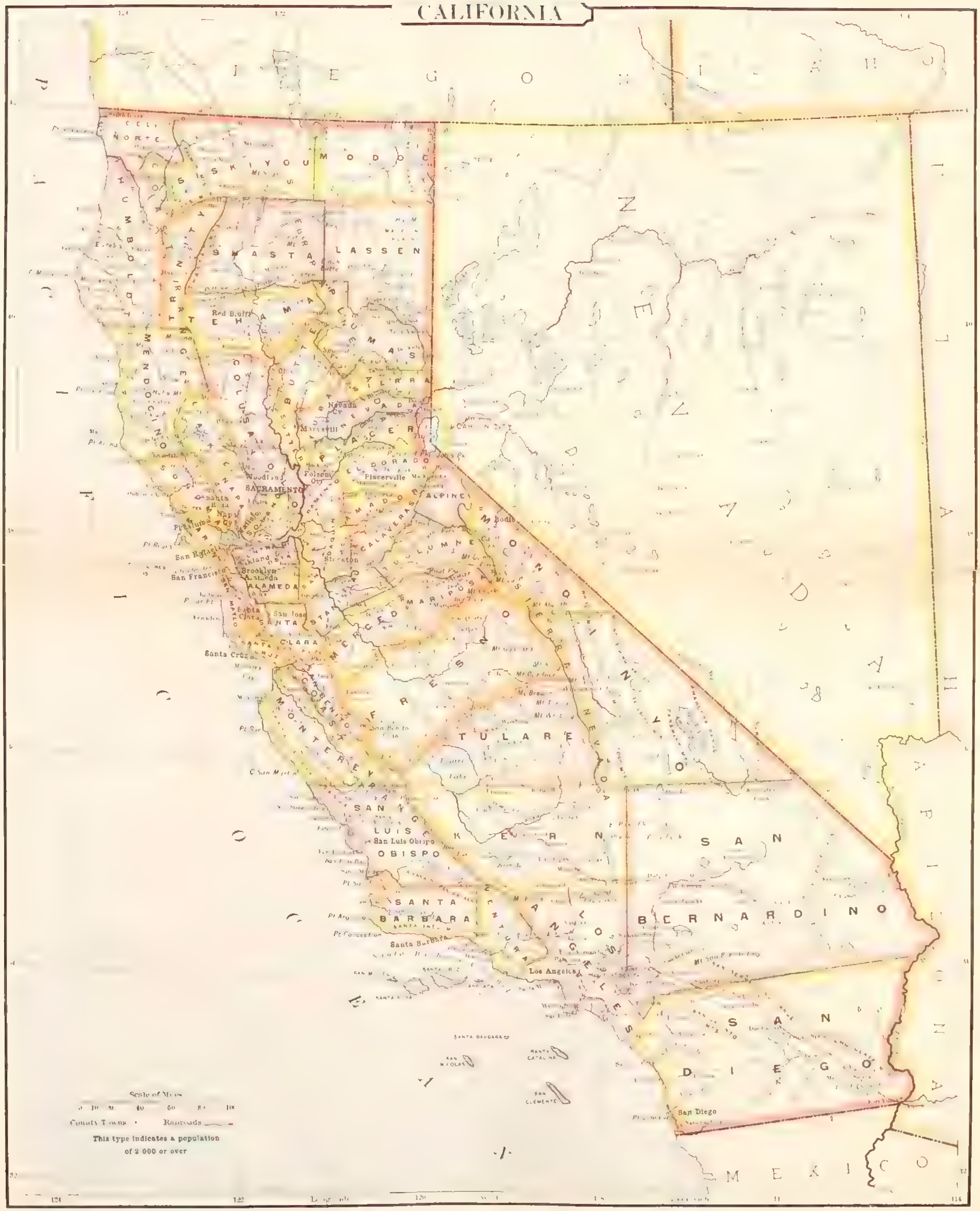
ANSWERS TO CORRESPONDENTS.

Loss of the Patellar Reflex in Diabetes.—A correspondent, referring to an abstract published in a recent issue of the "Journal," says: "Will you be kind enough to give me the normal patellar reflex in health and the symptoms in loss of this condition as observed in diabetes?" 1. Our correspondent is doubtless familiar with the phenomenon under some other name, perhaps that of "knee-jerk" (meaning a sudden, jerk-like extension of the leg on the thigh when a sharp tap is given upon the patella or its ligament, the limb being in a state of muscular quiescence at the time). 2. We do not understand that cases of diabetes in which this reflex is lost differ in their other symptoms from ordinary cases of the disease.

Training Schools for Nurses.—The principal schools in New York State and Pennsylvania, the titles of which were asked for by a recent correspondent, are, so far as our information goes: Bellevue Hospital Training School, 426 East Twenty-sixth Street, New York; Charity Hospital Training School, Blackwell's Island, New York; New York Hospital Training School, West Fifteenth Street, New York; Mount Sinai Training School, 850 Lexington Avenue, New York; Buffalo General Hospital Training School, 100 Hight Street, Buffalo; Training School of the Long Island College Hospital, Brooklyn; Brooklyn Training School; Brooklyn Maternity and New York State School, 46 Concord Street, Brooklyn; Training School of the Woman's Hospital of Philadelphia; Philadelphia Hospital Training School; Training School of the Lying-in Charity, 126 North Eleventh Street, Philadelphia.

H. B. S., Williamsport, Md.—In answer to your inquiries, we can only advise you to consult your family physician.

CALIFORNIA


OREGON
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MENDOCINO
COLUSA
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PLACER
LAKE
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SONOMA
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SAN JOAQUIN
CALAVERAS
TUOLUMNE
MONO
ALAMEDA
SAN MATEO
SANTA CLARA
SANTA CRUZ
STANISLAUS
MERCED
MARIPOSA
FRESNO
INYO
SAN BENITO
MONTEREY
TULARE
SAN LUIS OBISPO
KERN
SANTA BARBARA
VENTURA
LOS ANGELES
SAN BERNARDINO
SAN DIEGO
Red Bluff
Eureka
Nevada City
Marysville
Folsom City
Placerville
Woodland
Sacramento
Santa Rosa
Napa
Vallejo
Petaluma
San Rafael
Oakland
Brooklyn
Alameda
San Francisco
Stockton
San Jose
Santa Clara
Santa Cruz
Bodie
San Benito
Tulare Lake
San Luis Obispo
Santa Barbara
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Santa Catalina
San Clemente
Pt. Reyes
Pt. Arena
Pt. Sur
C. San Martin
Pt. Arguello
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Scale of Miles
0 10 20 40 60 80 100
County Towns •
Railroads
This type indicates a population of 2 000 or over
124
122
120
118
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32

Original Communications.

SOUTHERN CALIFORNIA:

A CLIMATIC SKETCH.*

By WALTER LINDLEY, M. D.,
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Mr. President and Fellows of the Kings County Medical Society: Having received my diploma from the Long Island College Hospital, an institution that has attracted much attention and favorable comment owing to the progressive spirit of its faculty—and particularly to the radical forward step taken during the past year—that numbers among its alumni such distinguished men as Skene, Wight, McCorkle, and my brilliant and industrious friend, B. F. Westbrook; having begun my medical career as a Brooklyn ambulance surgeon, under the superintendency of that sanitarian of national reputation, Dr. J. H. Raymond, in which position I was succeeded by Kings County's present coroner, Dr. Henry J. Hesse; having, in fact, received my medical pabulum in this city, it is with special pleasure that I return here to tell you of my adopted home.

In acknowledging the great honor that you, through your president, Dr. Fowler, have conferred upon me by inviting me to address you this evening, I can not tell you of a country where a man with incipient phthisis can go and spend three months, return to the environments that produced his disease, and be a well man. But I shall tell you of a land containing cities and plains, mountains and valleys, oceans and rivers, meadows and deserts, the rose and the cactus, pine forests and orange groves, where the person in the first stage of phthisis may go, make a delightful home for himself, and in time become a man of average health; a place where the child of a phthisical parent will usually develop into healthy manhood.

Many patients with incipient phthisis are told to go and spend a few months at some popular health resort. They should be told to go until they found a climate that suited them, and then remain there. It should not be pictured to them as a holiday vacation, but rather as a long struggle for life.

Nine tenths of the area of California lie upon a slope which faces the Pacific Ocean. A small portion of the State lies east of the Sierra Nevada Mountains and is drained by the Colorado River that empties into the Gulf of California; a still smaller portion is a part of the Great Basin, and its waters flow into sinks and evaporate.

California extends over about ten degrees of latitude, its southern boundary crossing the thirty-third parallel and joining the Mexican Republic. It covers ten degrees of longitude. Its most eastern point reaches within one hundred miles of the meridian passing through Salt Lake City; its western point, Cape Mendocino, reaches nearly to the one hundred and twenty-fifth degree of west longitude.

Between California and the Mississippi Valley is a high plateau nearly one thousand miles wide, commonly known as the Great Basin. The Rocky Mountains are the eastern and the Sierra Nevada chain the western rim of this basin. The Sierra Nevada Mountains form a high barrier, reaching in places more than 14,000 feet above the sea-level. The greatest altitude in California is that of Mount Whitney, 14,898 feet above the level of the sea, while the greatest depression is that of the Arroyo del Muerto, usually called Death Valley, which is 400 feet below sea-level. In northern California between the Sierra Nevada Mountains and the ocean is an associate range called the Coast Range, and between these two ranges of mountains lies the great northern California Valley, drained by the Sacramento River on the north and the San Joaquin on the south. At the southern limit of the San Joaquin Valley rises a high spur of mountains extending east and west and connecting the Coast Range with the Sierra Nevada chain. This is the Tehachipi Range, and south of it lies southern California. The change from Boston to Savannah is not greater than the transition from the northern to the southern slope of Tehachipi Pass. A new flora, a new fauna, and a new climate are experienced, and the traveler passes from a temperate to a semi-tropical country.

Southern California is therefore a distinct physical region in itself.

The latitude of southern California is that of southern Italy, the Mediterranean Sea, and northern Africa.

In this part of the State the trend is from the northwest to the southeast. A long strip of coast, however, runs directly east and west. The winds of this region have much the nature of monsoons, the name that is given to the semiannual winds that blow six months in one direction and then six months in the opposite on all western and southern coasts. Their prevailing direction is toward the southeast in the summer or dry season, and toward the northeast in the winter or rainy season. Their normal direction is much deflected, however, by the hot interior regions of the Great Basin, so that in the summer, when the heat would otherwise be intense, a brisk breeze is always blowing from the sea to supply the place of the rising currents of air in the hot interior deserts.

All the general winds of southern California are sea-winds, and they in turn receive their heat from the Kuro Siwo or Japan current, the great gulf stream of the Pacific Ocean.

This great river of the ocean has its origin in the China Sea and pushes its drift of warm water in a great oval current across the Pacific Ocean and thence southward along the western coast of North America, and the winds from over this vast warm stream impart their genial qualities to the whole western slope of our continent.

By referring to the map you will see that southern California—as a health resort—consists of portions of five counties—viz., Santa Barbara, Ventura, Los Angeles, San Diego, and San Bernardino. All but the last of these counties embrace a level belt of land aligning the ocean, which in the north (Santa Barbara County) is a narrow strip, but toward the south widens into a vast plain extending nearly one hundred miles inland, flanked on the north by a succession of beautiful, undulating foothills which rise higher and higher as they retreat from the ocean, in a series of successive terraces, until they reach an altitude of 5,000 feet.

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* Read before the Medical Society of the County of Kings, October 19, 1886.

From Santa Barbara eastward there is a succession of mountain spurs, alternating with beautiful valleys. From Los Angeles eastward are beautiful valleys and plains, containing the prosperous and delightful cities and towns of Pasadena, Pomona, Riverside, and San Bernardino; "and still beyond, a hundred miles inland over the open valley from Los Angeles, is the San Gorgonio Pass, land-marked from the Colorado to the sea by the twin peaks San Jacinto and San Bernardino, with snowy crests rising ten thousand and eleven thousand five hundred feet above the plain. Here the Sierra breaks down, forming the only natural pass in all its long chain; the grassy plain, without even a dividing crest, swelling and rolling through, at an elevation of only two thousand seven hundred feet—a natural gateway for the southern trans-continental roads upon their way to the East. Beyond is the great mystery of the rainless desert." [*]

From San Diego eastward, plains and rolling land alternate to the border of the Great Basin. That part of the Great Basin which includes the eastern part of southern California is best known as the Mojave and Colorado deserts. The soil in these so-called deserts is generally excellent, and, as other lands become densely populated, water will be developed, and these great wastes will be made to blossom with something of more value than the cactus. The soil throughout southern California is porous.

At present the greater part of the population, the chief seats of industry, and all the health resorts, are situated within one hundred miles of the coast. So that, in speaking of southern California as a health resort, we refer to the coast belt of plains and the high terraces just beyond them.

All writers on climatology agree that the first requirement of a climate for all classes of invalids is that it shall be equable in temperature.

Now, let us compare the temperature of Los Angeles, which is no better than the average southern California climate, with that of Boston, which I believe is no worse than the average New England climate.

From the Signal Service records at Los Angeles for a period of six years I learn that the average temperature of January, the coldest month, was 52° F., while for August, the warmest month, the average temperature was 69·70.

The Signal Service records for 1881 of the office at Boston [†] show that the average temperature of January, the coldest month, was 32·60°, while the average temperature of August was 69·90°, thus showing a difference in average temperature of hottest and coldest months in Los Angeles of less than 18°, while the difference between the average temperature of the coldest and the average temperature of the hottest month in Boston is 37·3°. Further, these same records show that the greatest daily range in temperature in Los Angeles was 29°, while the greatest daily range in Boston was 69°. Gentlemen, it is not necessary for me to comment on these figures. You can readily draw your own deductions.

Another point upon which all climatologists agree is that the best climate is the one that gives the patient the most pleasant, sunshiny days—days that he can pass sitting, walking, riding, or driving in the fresh air. This leads me to speak of the rain-fall.

The climatic seasons of the Pacific coast are practically two—a wet and a dry. The rainy season in southern California begins about Thanksgiving Day, and closes with April. There is no continuous precipitation, as in Oregon. Sometimes there is a succession of showers that last from one to three days; but the great majority of the winter showers come at night, and the days following them are bright and, permit me to say, glorious.

The past month, which I have spent so pleasantly in New York, has, with the exception of two or three hot days, been a fair sample of an average Los Angeles January.

With the month of May the dry season begins. This term "dry season" applies only to the coast valleys. In the mountains there are now and then sharp thunder-storms, and it is at this time that the desert beyond the Sierras has its rainy season.

I have often from Los Angeles, in the midst of her dry season, witnessed black clouds and vivid lightning, telling me of summer storms east of the mountains. Sometimes even in Los Angeles there is a shower during the summer that starts the oldest inhabitants into a chestnut reminiscence.

There is seldom a year in which there are a half dozen cloudy days between the middle of May and the middle of November.

I will again refer you to the Signal Service reports of the Los Angeles station, in order that you may have a more positive basis of information than my casual observations:

YEAR.	Jan.	Feb.	March.	April.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total.
1879......	3·59	0·97	0·49	1·19	0·24	0·03	0·00	0·00	0·00	0·93	3·44	6·53	17·41
1880......	1·33	1·56	1·45	5·06	0·04	0·00	0·00	0·00	0·00	0·14	0·67	8·40	18·65
1881......	1·43	0·36	1·66	0·46	0·01	0·00	0·00	0·00	0·00	0.82	0·27	0·52	5·53
1882......	1·01	2·66	2·66	1·83	0·63	0·00	0·00	0·00	0·00	0·05	1·82	0·08	10·74
1883......	1·62	3·47	2·87	0·15	2·02	0·03	0·00	0·00	0·00	1·42	0·00	2·56	14·14
1884......	3·15	13·37	12·36	3·58	0·39	1·39	0·02	0·02	0·00	0·39	....	....	......
Average..	2·02	3·73	3·58	2·04	0·55	0·24	Trace	Trace	0·00	0·62	1·24	3·61	13·29

Now we will compare these figures with the rain-fall in some other well-known places, as recorded in Vol. XXIV, "Smithsonian Institute Reports." [*]

Average Rain-Fall in Inches.

PLACE.	Period of observation.	Spring.	Summer.	Aut'mn	Winter.	Year.
Los Angeles........	5 years.	3·73	0·01	1·91	7·23	12·88
San Francisco.......	20 "	4·80	0·49	2·68	12·32	20·29
Asheville, N. C.[†]....	11 "	......	......	......	......	40·2
Cincinnati...........	41 "	11·17	12·67	9·29	9·83	42·96
New York city......	29 "	11·43	13·08	11·20	10·81	46·52
Jacksonville, Fla....	13 "	10·01	21·27	13·07	8·66	53·01

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[*] "Climate Studies in Southern California," by J. P. Widney, A. M., M. D., California, November, 1884.

[†] "Physical Geography," by J. W. Redway.

[*] "California for Health," by John L. Davis, M. D., "Cincinnati Lancet and Clinic," February 27, 1886.

[†] "Climatic Treatment of Disease," by Henry O. Marcy, A. M., M. D., "Sanitarian," March, 1886.

I hope you will notice the amount of rain-fall in Los Angeles during winter. It was only yesterday a prominent physician of New York city expressed great surprise when I told him that there were only from twelve to twenty rainy days in Los Angeles during the rainy season. He said he thought it rained there continuously during that period.

Along the coast belt, to a distance of four or five miles inland, there is little variation the year round in relative humidity. From this line to one which marks an altitude of one thousand feet, the atmosphere during the winter months is somewhat moist. During the spring months fogs sometimes come in from the sea, and remain persistently until nine or ten o'clock. At these times the tender-foot, as the newly arrived eastern man is affectionately styled by the old settlers, will start out carrying an umbrella, feeling confident that rain will soon fall, and will be surprised in a short time to find there is not the trace of a cloud, and that his umbrella can only serve as a sun-shade.

These fogs are not unpleasant to the person of average health; but people suffering from pulmonary diseases should remain in the house of a morning until there is a clear sky and bright sun. During these months the dew-fall is also considerable, and assists materially in maturing the growing crops.

By the 1st of June the atmosphere, both day and night, is very dry, and also very pure. It is nothing unusual in Los Angeles during the summer to see long strings of meat hanging up, day after day, freely exposed to the air, where, instead of putrefying, it cures, or, as the natives say, "jerks." Professor J. W. Redway, a well-known scientist, tells me that flasks containing carefully prepared cultivation solutions will remain sweet many days before they show signs of breaking down. The air is so pure and dry that persons of delicate health may camp out, sleeping on the ground in the open air. There may be some embarrassment arising from the fact that centipedes have taken lodgings in one's shoes, but there is no danger from exposure to the elements.

At a distance from the coast of from about 25 miles onward, where the altitude is 1,000 feet and upward, there are many pleasant locations where fogs are unknown and where the constant dryness and purity of atmosphere are a remarkable feature.

But your health resort may have a mild and equable temperature, a proper altitude, a pure atmosphere, and yet, if it has not variegated scenery and pleasant social surroundings, the health seeker will die of *ennui*.

This is the point in which Los Angeles, as well as many other places in southern California, is most happily endowed. A thriving city of 45,000 inhabitants, with satisfactory hotels, boarding-houses, and restaurants; excellent schools ranging from the kindergarten and public school to colleges, a State Normal School, and a well-equipped university; a commercial metropolis with the ocean at its door, and the center from which radiate seven lines of railroad; with cable roads that noiselessly carry people from the busy streets over the hills to the suburbs; lighted 340 days in the year by the sun and 365 nights in the year by electricity; elegant churches in which worship Roundheads and Cavaliers, the Salvation Army and the Unitarians; an opera-house fully equal to any in the city of Brooklyn, in which are to be seen during the year all the leading theatrical attractions of America, ranging from the irrepressible New York negro minstrel troupe to that "noblest Roman of them all"—Lawrence Barrett; from the vivacious Rhea to the histrionic Janauschek; the home of the rose, where the humblest cottage is surrounded by a perpetual flower garden; where heliotropes and fuchsias clamber to the tops of the houses and there bloom in all their beauty the year round; and where the bright and cheerful geranium, which you care for here so tenderly in your conservatories, is frequently used for hedges and reaches a height of several feet.

Add to this the fact that Los Angeles is located in a county which produces annually many millions of bushels of barley, wheat, and corn; a county in which there are now growing 22,000,000 grape-vines, 1,000,000 orange-trees, and many thousands of olive, apple, apricot, nectarine, fig, and pomegranate trees, and you will realize that there is variety enough to entertain the most fastidious.

Beyond all these points of interest are the two that God put there before man planted the fig-tree or the vine—the mountains and the ocean. Fourteen miles east of Los Angeles are the Sierra Madre Mountains, and fourteen miles west of Los Angeles is the Pacific Ocean. Was ever the Creator more lavish?

Gentlemen, had you ridden through those orange-groves and vineyards, and gone into homes surrounded by the palm, the pomegranate, the banana, the fig, and perpetual flower-gardens, and then when you came out of those homes had your temples fanned and your lungs inflated by the pure balmy breath of the ocean, and, on looking up, feasted your eyes on the ever-changing scenery of the purple-tinted mountains—had you done this as I have for the last twelve years, you would pardon me for departing from the cool judicial style usual in papers that are to be read before scientific societies.

I shall now say a few words in regard to the benefits derived from the climate of southern California—no statistics, but simply a few thoughts the result of my own observations.

Diseases of Children.—There summer disturbances of the intestinal tract are never prevalent. I have been physician to the Los Angeles Orphans' Home for the last six years, and, although there are about eighty inmates, many of them under two years of age, yet in all that time there has not been a death from the so-called cholera infantum or any disease of similar nature. Scarlet fever, diphtheria, measles, and whooping-cough usually run a very mild course. During the six years there have been two epidemics of scarlet fever in the home and but two deaths, and no deaths from the other diseases mentioned. I have never known the child of a phthisical parent to die of pulmonary disease.

Dyspepsia.—Dyspeptic persons are almost invariably relieved, owing, in part, to the character of food always available. Every variety of fresh vegetables can be had all the year; strawberries are always in the market; oranges, lemons, and limes are in season during winter and spring;

apricots, nectarines, peaches, and several varieties of berries ripen during May, June, and July, and apples and grapes are in season until the orange again ripens. California flour is unexcelled. Beef, mutton, fish, the products of the dairy, and many varieties of game, complete a range of diet that is within reach of all.

Malarial Diseases.—Intermittent fever never develops in Los Angeles County. I speak thus positively because my experience as Health Officer of the city of Los Angeles, Attending Physician to the Los Angeles County Hospital of 100 beds, as well as my private practice, justifies me in the statement. I believe the same can be said of the other counties indicated as the health region of southern California. On the other hand, I have had numerous patients with ague that have come saturated with malaria from certain portions of the San Joaquin Valley. A short residence in Los Angeles, assisted by ordinary treatment, cures them, and a permanent residence gives them perfect immunity.

Hay Fever.—A few months since I became interested in this subject, and, after corresponding with fifty of the leading physicians in the counties mentioned, arrived at the following conclusions:

"1. Hay fever never originates in southern California.

"2. All persons with hay fever that have come, seeking relief, to southern California, have been benefited; almost all have been cured.

"That a few miles inland, in the foothills, relieves such as are not benefited by a residence at the sea-side." *

Asthma.—The great majority of persons afflicted with this disease can get permanent relief within a radius of 60 miles of Los Angeles; many have perfect immunity in the city or its immediate vicinity, but Riverside, 60 miles east, and Newhall and Ravenna, 30 miles north, are the most noted resorts for asthmatics, although I have had some patients that could only live on the sea-coast. Among these is my friend, Dr. E. C. Folsom (Harvard), who, after vainly trying many famous resorts in Europe and America, found perfect health at Santa Monica, where he is doing an extensive practice.

Senility.—This is a paradise for persons who have passed the meridian of life. Instead of spending the most of their lives in rooms artificially heated, they get a new lease of life from the sun's rays, the pure atmosphere, and inspiring surroundings.

Nervous Prostration.—Persons in this condition receive benefit from the pleasures of out-door life and the refreshing sleep that comes at night. No matter how warm the day, the nights are invariably cool enough to encourage rest. There is something soothing in the very atmosphere.

Chronic Rheumatism.—Besides the beneficial effects of the climate on this disease, there are a great variety of mineral springs, hot and cold, that have quite a local reputation, and about which an interesting volume might be written.

Phthisis.—In an interesting paper on "The Climatic Treatment of Phthisis," † Dr. Harold J. Williams says: "An ideal health resort for this disease should be sparsely and newly settled. It should possess a pure water-supply and adequate drainage. It should be of a dry and porous soil, and should be favorably situated with respect to neighboring heights and marshes and prevailing winds. It should be equable in temperature, and should possess the maximum of pleasant weather. It should not be so hot as to be enervating, nor so cold as to prevent out-door exercise and proper ventilation of houses. It should afford plenty of amusement; it should not be crowded with consumptives, and it should be sufficiently unfashionable to admit of hygienic dress.

Dr. Tyndale, in his work on the treatment of consumption, says dryness is the chief factor of an ideal climate, and a certain equability of temperature the next.

Dr. Williams, of London, says in the majority of cases of chronic phthisis, and especially in women whose circulation is weaker, the warm and dry climates are the best.

Parkes, in his work on "Practical Hygiene," says: "The best climates for phthisis are those which permit the greatest number of hours to be passed out of the house."

Professor Loomis, in his work on "Diseases of the Respiratory Tract," says: "Endeavor to select a climate where he may be out of doors every day and at any hour of the day."

Within a radius of 10 miles of Los Angeles all the requirements mentioned by the distinguished authorities quoted above can be found in numerous points happily combined. Time does not permit me to give you reports of cases. It would take hours to report all the cases of physicians who have themselves come to Los Angeles and other points in southern California suffering from phthisis of various types and stages, and who are now following their chosen profession in apparent good health. Several of these medical gentlemen are well known in Brooklyn. The great majority of business and professional men in southern California originally came there for the health of themselves or their families. I am tempted to go into the description of some of these cases, but this paper's great length forbids.

The question will immediately arise, What altitude shall we select—the sea-level, as at Santa Monica and Long Beach; an elevation of from 400 to 500 feet, as at Los Angeles; an altitude of from 1,000 to 1,200 feet, as is found 8 miles farther inland in the vicinity of the beautiful young city of Pasadena; an elevation of from 1,500 to 2,500 feet, as at La Canyada, Sierra Madre, and Monrovia; or shall we send our patient on up to the sanitarium known as the Arroyo Lead Falls, that has an elevation of 4,300 feet, and is 25 miles east of Los Angeles?

Jaccoud * strongly advocates an altitude of from 1,650 feet upward, but in the course of his work makes numerous exceptions. He says: 1. "Should the patient be individually of an excitable nature, high climates must on no account be taken into consideration." 2. "When signs of nervo-vascular excitability exist in a patient, the change to a high altitude should be made with care." 3. "Do not send patients to a high altitude who are already affected with catarrh due to softening tubercle at the beginning of winter." 4. "Ulceration of the larynx in tuberculosis and ulceration of the intestines should completely and unreservedly exclude high altitudes." 5. "In the pneumonic form of phthisis, climates of high altitudes are absolutely counter-indicated." 6. "The *wasting period* of the disease, whether occurring early or late in the complaint, should, in my opinion, unreservedly exclude climates at a high altitude." 7. "Of whatever type it may be, *fever* is an element in the consumptive phase of the disease, of which it is plainly characteristic, and, though the emaciation may be as yet but little pronounced, it counter-indicates the employment of high climates." Dr. Williams, of London, says: "Phthisis of catarrhal origin has been shown to profit most by a warm and equable climate, even though accompanied by a certain amount of moisture." Dr. Henry Worthington, a prominent practitioner in Los Angeles, who went there fourteen years ago suffering from pulmonary disease accompanied by hæmoptysis, says:[*] "In a climate like ours, with favorable surroundings, I never despair of a case in which there is evidence of fibroid disease of the lungs, be it ever so extensive."

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* "Hay Fever," "Southern California Practitioner," July, 1886.

† "The Sanitarian," July, 1886.

* "The Curability and Treatment of Pulmonary Phthisis." By S. Jaccoud. D. Appleton & Co., New York.

A few years since the Legislature of California instructed the State Board of Health, of which the late lamented Dr. Henry Gibbons, of San Francisco, was president, to select the most favorable point for a State sanitarium for consumptives. After months of careful investigation they reported that the first place belonged to Sierra Madre Valley, 12 miles east of Los Angeles.

My own experience has been that the great majority of patients with consumption do well in the immediate vicinity of Los Angeles, but that the best place is a few miles nearer the mountains, in altitudes ranging from 1,000 to 2,000 feet.

By all means insist that your patient does not locate himself in a large hotel, boarding-house, or sanitarium. Whether he is to live in the city or the country, if possible have him take some of his family, rent or build a comfortable cottage, where he can have pure air uncontaminated by the proximity of others suffering from the same disease, and where he can have his own flower-garden, fruit-trees, and horse to keep him interested out of doors.

By all means do not allow your patient to come rushing home just at the breaking up of the eastern winter. If he must come home, let it be from the middle of May to the middle of June. He had far better remain during the summer. A southern California summer is just as beneficial and enjoyable as the winter. Yes, I shall go a step farther: The summer will be of more benefit to your patient than the winter. Then is when the atmosphere, even near the coast, is almost perfectly aseptic.

Medical Society of the County of New York.—At the annual meeting, held on Tuesday, October 26th, the following officers were elected for the ensuing year: Dr. Laurence Johnson, president; Dr. F. R. S. Drake, vice-president; Dr. W. M. Carpenter, secretary; Dr. C. H. Avery, assistant secretary; Dr. O. B. Douglas, treasurer; Dr. Daniel Lewis, Dr. H. T. Pierce, Dr. W. E. Bullard, Dr. W. O. Moore, and Dr. J. S. Warren, censors. Twenty-four delegates to the Medical Society of the State of New York were also elected.

MITRAL STENOSIS.

CASES AND REMARKS.[*]

By GLENTWORTH R. BUTLER, M. D.,

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The object of this brief and hastily prepared paper is to record fourteen cases of mitral stenosis, and thereby make a small addition to the existing statistics of this form of cardiac lesion. The cases here given were treated in the Department of Diseases of the Thoracic Viscera in St. Mary's General Hospital, of Brooklyn, N. Y. The clinical examinations and therapeutic measures were conducted by Dr. B. F. Westbrook, Dr. I. H. Platt, and the writer.

Case I.—Male, aged forty. So far as ascertained, this patient had suffered from acute rheumatism but once—about one year before admission. When admitted he was suffering from dyspnœa. He also complained of gastric and bronchial symptoms. There had been no hæmoptysis. Œdema of the lower extremities was present to a slight degree. Physical examination showed some cardiac hypertrophy. A blowing systolic murmur was heard over the anterior cardiac space, propagated into the axilla, but not heard posteriorly. Over the apex, between the nipple and the sternum, was also heard a presystolic vibratory murmur. The pulmonary second sound was markedly accentuated. Under treatment, comprising tonics and digitalis, this patient improved greatly and was discharged, the murmur persisting.

Case II.—Female, aged forty-four. This case was also preceded by acute rheumatism nine years previous to admission. There were some gastric symptoms, but neither dyspnœa nor hæmoptysis. The record of the physical examination is imperfect, simply mentioning the presence of a presystolic murmur. Improvement was rapid under a simple tonic treatment.

Case III.—Female, aged forty-four. This case gave a history of several attacks of acute rheumatism. When admitted to the hospital she presented symptoms of melancholia. In the course of examination a presystolic apical murmur was discovered, of moderately blubbering character, between the nipple and sternum. There was no cardiac hypertrophy, and no fremitus on palpation. Œdema of the lower extremities was absent, and dyspnœa was very slight. This case improved under treatment directed to the betterment of the general health, the murmur persisting.

Case IV.—Female, aged thirty. No history of rheumatism could be elicited. There had been no hæmoptysis. Dyspnœa was manifest. Slight œdema of the lower extremities was present. The pulse was soft and compressible. Physical examination showed the apex-beat in the fifth interspace, one inch to the left of the nipple. There was a slight thrill with the apex-beat. To the left of the sternum and toward the apex the first sound was very loud and preceded by a harsh murmur. The second sound of the heart was feeble and accompanied by a bellows murmur. The urine contained, by volume, one eighth albumin and granular casts. This case had a fatal termination, and the autopsy showed, in addition to considerable hypertrophy, aortic stenosis and incompetence. The vela of the mitral valve were agglutinated, forming a funnel-shaped opening.

Case V.—Male, aged twenty-eight. He gave the usual history of rheumatism. Dyspnœa existed, but no œdema. The pulse was notably small, but not irregular. Physical examination showed the apex-beat half an inch to the left of the nipple in the fifth interspace. There was no fremitus. The pulmonary and aortic second sounds were apparently normal. There was a presystolic murmur at the apex over a space two and a half inches in diameter. This bruit was soft in quality and did not possess the blubbering quality. The patient improved rapidly under a tonic regimen, the bruit still persisting.

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[*] "Observations on Fibroid Phthisis," "Southern California Practitioner," August, 1886.

[*] Read before the American Climatological Association at its third annual meeting.

Case VI.—Female, aged thirty. This patient presented on examination an apex-beat in the fifth interspace in the mammillary line. A masked vibratory fremitus accompanied the action of the heart. On auscultation, a strong, harsh, blubbering, presystolic murmur was audible. Otherwise the cardiac sounds were apparently normal. The symptoms for which she was admitted—slight dyspnœa, palpitation, and general weakness—were distinctly due to overwork. They yielded quickly to rest in bed, with little medication.

Case VII.—Male, aged twelve. This patient had a history of three previous attacks of rheumatism. He complained of slight cough and considerable cardiac pain. There was some œdema of the lower extremities. Physical examination showed a marked retraction of the chest-wall with the systole of the heart. The apex-beat was two inches to the outside of the nipple, in the sixth interspace. There was an accentuated closure of the pulmonary valve. Over the middle sternum was a faint diastolic murmur. At the apex there was a marked systolic murmur and a somewhat fainter presystolic bruit. This patient improved under the use of iron and digitalis, the murmurs persisting.

Case VIII.—Male, aged thirty-five. This patient had suffered from rheumatism and endocarditis five years previous to admission. When admitted, dyspnœa and cyanosis were prominent symptoms. There was marked œdema of the lower extremities, extending upward to the middle of the thigh. The pulse was very rapid, feeble, and irregular. The jugulars were swollen and pulsating. The heart was dilated. Epigastric pulsation was well marked. The apex-beat was in the fifth interspace beyond the nipple. A systolic bruit was heard at the apex and transmitted into the axilla. The aortic second sound was inaudible. The pulmonary second sound was accentuated. There was no albumin in the urine. Mitral stenosis was diagnosticated from the pulse, the accented closure of the pulmonary valves, and the turgescence of the venous system. The patient was practically moribund. As a last resort, and to relieve the venous side of the circulation, the right auricle was aspirated by Dr. B. F. Westbrook, and eighteen ounces of blood were withdrawn, with marked but temporary relief. At the autopsy nineteen ounces of blood were found in the pericardial cavity, and blood could be made to ooze from the needle puncture by pressure on the heart. The operation was evidently done at so late a date that the cardiac muscle had lost its tonicity and power of contraction, thus preventing the closure of the aspirator puncture. In addition to mitral incompetence, the autopsy showed a marked mitral stenosis, the orifice admitting only the tip of the middle finger. The lungs were œdematous, and there was considerable fluid in the abdominal and thoracic cavities.

Case IX.—Female, aged forty-six. Scarlatina appeared to be the only precedent disease in this case. Cardiac palpitation and dyspnœa, not excessive, were the subjects of complaint. There was very slight œdema of the lower extremities. The pulse was small and rapid. Physical examination showed the apex in the fifth interspace, half an inch outside of the nipple. The pulmonary second sound was loud but not sharp. At the apex and just above there was a rough presystolic murmur. In this case the fluid extract of cactus grandiflora acted very effectively, and improvement was rapid, the murmur still existing.

Case X.—Male, aged seventeen. This patient gave a history of rheumatism four years before admission. He was admitted for the relief of a traumatic ulcer, which healed promptly. A lobular pneumonia then developed, from which he became fairly convalescent. Some cardiac symptoms were then manifested for the first time in his history. Physical examination showed the apex-beat moved to the left and below the nipple, with notable bulging of the præcordial space, and a marked pulsation extending over a large area in the same region. A to-and-fro murmur was heard at the base over the aortic valves, and an apical systolic murmur, all three well marked. In addition, a faint presystolic bruit was audible over the area of mitral obstructive murmurs. The case had a fatal termination, and the autopsy disclosed great dilatation of the left ventricle, and a similar condition of the left auricle. The aortic orifice was stenosed and the valves incompetent. The vela of the mitral valve were thickened and adherent, making a funnel-shaped contraction. They were also incompetent.

Case XI.—Female, aged thirty. In this case extensive œdema existed. Vomiting and cough were prominent symptoms. The urine was lessened in quantity and contained considerable albumin. Physical examination showed turgescence and strong pulsation of the jugulars. A diastolic murmur was heard along the right border of the sternum, replacing the aortic second sound. The pulmonary second sound was accentuated. A systolic murmur was audible at the apex, transmitted to the spine posteriorly. Above the apex, just internal to the nipple, was a presystolic murmur of rough quality. There was also a marked pulsation one inch to the left of the sternum, on a level with the nipple, and a systolic murmur was audible in this situation. The autopsy revealed incompetence of the aortic valve. The mitral leaflets were adherent, forming a button-hole contraction which barely admitted the tip of the finger. The mitral valve was also incompetent. The pulmonic orifice showed a marked degree of stenosis.

Case XII.—Female, aged seventeen. This patient gave a history of rheumatism two years before admission. Vomiting, œdema of the feet, and intercostal neuralgia were the prominent symptoms. There had been no hæmoptysis and no dyspnœa. Physical examination revealed a systolic murmur at the apex, transmitted to the spine posteriorly, and a presystolic bruit of rough quality. The symptoms were soon relieved by rest and a simple tonic regimen, the murmurs still persisting.

Case XIII.—Male, aged twenty-eight. He gave a history of repeated rheumatic attacks since childhood. Dyspnœa and hæmoptysis had been prominent events in the history. When admitted there was marked œdema of the lower extremities and excessive dyspnœa. He was placed on the use of fluid extract of *Cactus grandiflora*, but within a day or two cyanosis developed, the jugulars became distended, and the pulse was very small, rapid, and irregular. The hand, laid lightly on the outer part of the right hypochondrium, revealed a slight but unmistakable pulsation of the liver, with excessive tenderness of the latter viscus. The apex-beat was carried downward to the seventh interspace, two inches and a half to the outside of the nipple. A heaving impulse was visible and palpable over the entire præcordia. On auscultation, the sounds of the heart were so tumultuous that nothing could be ascertained with certainty beyond a faint systolic bruit at the apex and a stronger systolic murmur over the tricuspid area. The pulmonary second sound was accentuated, and the second cardiac sound could not be heard at or outside of the apex. This combination of signs was taken to indicate mitral stenosis with engorgement of the left auricle, lungs, and right heart, with consequent functional incompetence of the tricuspid valve. The therapeutic indications were fulfilled by the administration of calomel and saline cathartics, with free dry cupping over the liver. The fluid extract of digitalis was then substituted for the *Cactus grandiflora*. Immediate improvement was the result. Three days after this the physical signs had changed. The pulse had gained considerable regularity, and, instead of being notably small, possessed the characters of the "shot-pulse" of aortic regurgitation. The cyanosis had in a great measure disappeared, as had also the tenderness and pulsation of the liver. On auscultation, the systolic murmur over the tricuspid area was no longer perceptible. The mitral systolic murmur had gained in volume and intensity. Over the situation of the aortic valves a double bruit was plainly perceptible. There was no presystolic bruit. The fact of the right side of the heart having been unloaded, and the cardiac muscle having regained its tonus, fully accounted for the marked changes in the physical signs. The patient apparently continued to improve for a week or ten days, but died suddenly after an unusual exertion. The autopsy revealed a heart weighing thirty-six ounces. The aortic valves were thickened and incompetent, and the aortic orifice was dilated. The mitral leaflets were thickened and adherent, forming a funnel-shaped contraction, admitting one finger, and were also incompetent. The tricuspid orifice was more patulous than normal.

Case XIV.—Female, aged twenty-seven. This patient had been subjected to several attacks of acute rheumatism. She was admitted during an exacerbation of this affection. The joint symptoms were promptly controlled by the use of sodium salicylate. Gastric catarrh, vomiting, and bronchitis were more prominent and troublesome than the articular disease. After having been some days in the ward, a condition of moderate cyanosis developed, and the jugulars became distended. Examination showed a weak and very small pulse. The apex-beat was in the fifth interspace in the mammillary line. The pulmonic second sound was notably accentuated, and at the left of the sternum, from the third cartilage upward, was a soft blowing murmur, probably functional. At the apex a systolic murmur was audible, transmitted into the axilla. The second sound was not heard at the apex. Marked tenderness and some swelling over the right hypochondrium existed, but no hepatic pulsation could be perceived. The first sound of the heart was feeble and lacking in the muscular element. This combination of signs and symptoms was taken as indicating an engorged condition of the right side of the heart due to mitral stenosis, regurgitation, and loss of cardiac tonus. The character of the pulse, the filling of the jugulars, the absence of the first sound at the apex, and the hepatic congestion, constituted the data for assuming the existence of mitral stenosis in the absence of a presystolic murmur. The patient was apparently moribund, and the necessity of unloading the right chambers of the heart led to the application of wet cups over the liver, and the abstraction, in two cuppings, of sixteen ounces of blood. Concentrated solutions of a saline cathartic were also exhibited. As soon as these measures had taken effect, digitalis, strychnine, and ammonia were given. The results were eminently gratifying, and the patient, after the lapse of six weeks, is in excellent condition and soon to be discharged.

In briefly analyzing these cases, it appears that eight occurred in females and six in males, 57 and 43 per cent. respectively. Only five cases were of uncomplicated mitral stenosis, and of these four were in females and one in a male, 80 and 20 per cent. respectively. In the uncomplicated cases, dyspnœa was not a prominent symptom, and œdema was absent or very slight. In the remaining cases, anasarca and ascites were accounted for either by the existence of other valvular lesions or by the presence of renal changes. The valvular complications in four cases consisted of mitral incompetence. In two cases aortic and mitral regurgitation co-existed, and in two aortic stenosis and incompetence with mitral incompetence. Aortic stenosis and incompetence in one case completes the list. Death occurred in five cases, and the remaining patients were discharged improved. In the five fatal cases autopsies were held, and in each instance corroborated the diagnosis founded upon the clinical evidence. In ten cases a rheumatic history existed. In one rheumatism was explicitly denied, one was referred to scarlatina, and in two the evidence was negative. In conclusion, it should be stated that, while no deductions should be drawn from so limited a number of cases, yet the analysis agrees in a general way with the results of more extensive investigations. I desire to call attention to the successful treatment in Cases XIII and XIV, and to express the opinion that, when the technique of cardicentesis has been improved and perfected, it will have an important, if small, field of usefulness in the treatment of some apparently hopeless conditions.

As this paper is intended to be a simple clinical record, no reference has been made to the recent admirable papers by Flint, Broadbent, and others.

THE ABUSE OF INTRA-UTERINE MEDICATION.*

By BACHE McE. EMMET, M. D.

To attempt to overthrow a theory of practice or to discredit a method of treatment which has stood unquestioned through ages, and has so become honored, seems almost like an infringement on personal rights, and the bold one, before taking such a step, may well ask himself, Will he be deemed a heretic or may he flatter himself that he will advance scientific study by one step and, in the end, achieve some good?

The question I wish to bring before the members of this association is that of uterine discharges, their nature, their significance, and the indications for treatment furnished by them.

To state my position fully at the first and to account for my choosing as a subject for consideration almost, I may say, a thing without a name, is accomplished at once by asserting that it is the general practice in the profession at large, and also of many gynæcologists, to mistake a symptom for a disease, and so to treat it; and it is hoped, by an *exposé* of the matter and its discussion in this body, with an acceptance of the good in the argument and a rejection of the faulty, that the whole question may be on a firmer basis, and that there may result a truer understanding of pelvic pathology and of the relation of cause and effect.

It will be evident to all from the first that the subject-matter is a vast one, and that to treat it in full would furnish material for a volume, and, though our ambition may be high, in this case, our aim must be low, and I shall seek to compress within the limits allotted me the points essential to a full understanding of the question.

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* Read before the Alumni Association of the Woman's Hospital at its second meeting.

We are all so familiar with the term "leucorrhœa," and have been perhaps ourselves so accustomed to look upon it as an entity in the nosological chart, that we can not wonder that it should still stand in the eyes of the non-specialist as an individuality, without his questioning the rationale of considering it as an ailment by itself, or of treating it as a disease having its one cause, its own special pathology, and its definite and positive course to run.

It is the very commonest thing for a family practitioner, when he is informed that child, mother, or grandmother has a leucorrhœa, or the whites—and the term is familiar to them all—to recommend a wash or injection of some astringent, trusting that somehow or other he may hit it and hear no more about it. He has a horror of an investigation; in fact, takes for granted that none is needed, would not think of referring the case to some one who might know more, and so the patient may be patched up for a time, or, according to the wash chosen, perhaps even *improperly* cured.

The specialist even will too often think "the whites are the whites," and that he must attack them as such; and, although he takes a step in advance of the general practitioner and looks at the discharge and finds its habitat, yet will not seek out its true origin and attack the cause, but wastes much time and skill on the manifestation.

In viewing the question of uterine discharges as such, we must first of all establish the various kinds with which we meet, and in so doing we shall, by the just appreciation and balancing of concomitant circumstances, be led to a scientific understanding of their significance and be in a position to treat the causative disease, the symptom itself then vanishing; and we shall find established the truth of our process of reasoning.

The various uterine discharges are:

$$\left.\begin{array}{l}\text{Aqueous,}\\ \text{Serous,}\\ \text{Mucous,}\end{array}\right\}\text{ forming in their combinations }\left\{\begin{array}{l}\text{milky,}\\ \text{gummy,}\\ \text{ichorous,}\end{array}\right.$$

Purulent,
Muco-purulent,
Sanguineo-purulent,
Bloody,
Bloody with mucus.

Now, to seek to establish that no one of these discharges is indicative of a disease of the spot from which it springs would, of course, be futile, but, in considering them in turn, it shall be my object to point out the dependence of the greater number, and the manner of their depending, upon conditions entirely foreign to the uterine mucous membrane, although seemingly closely allied to lesions affecting it.

To avoid extending the subject beyond reasonable limits, I shall not undertake to consider the conditions of pregnancy; simply those which may truly be called gynæco-pathological.

Aqueous discharge, which may be slight or abundant, at intervals or constant, bland or acrid; what does it import? With it, especially if it has persisted for some time, we shall find the os uteri slightly open, the lips possibly a trifle everted and somewhat eroded, the cervical substance, in all likelihood, to some degree softened, the crown flattened from pressure upon the floor of the pelvis, the woman complaining of weight about the back, hips, and perinæum, with a sense of heat either forward toward the bladder or low down in the back; even a desire to micturate often, together with, at the first, a tendency to constipation, later on the bowels being too free.

The patient may give the history of having had some febrile movement, but it was slight, did not make much impression; at any rate, there is nothing of it present now; we have but local symptoms to deal with. An accurate observer will not content himself with having noted this much. He can not, from seeing such a discharge, establish a positive diagnosis. It would be worse than indifferent reasoning for him to hold that, because there is a flux from the uterine mucous membrane, consequently it is diseased, and worse than indifferent practice for him to attack this lining membrane as the offending organ and blind himself to outlying conditions.

Will he now explore the pelvis, he will find something positive to guide him, or he may find merely enough to corroborate or to overthrow a mental diagnosis made. Either he will find the pelvis engorged and tumid, the parts lying about the uterus œdematous and soft, the uterus only slightly enlarged, indicating a condition of *recent acute cellulitis*, or he will recognize that the uterus is enlarged beyond what the patient's history can in any way account for, be she multipara even, with subinvolution and all the attendants on multiple labors, and his mind will of necessity revert to commencing malignant disease of the body; or, again, the pelvic cellular tissue will be intact, the uterus normal, and he will discover an enlargement off to one side, presumably a dilated Fallopian tube which, somewhat constantly or at intervals, discharges its quantum of watery fluid; yet, even failing to find such an enlargement, the physician must bear in mind that it may have been; also that another possible source is from ruptured ovarian cysts and cysts of the broad ligaments or from ascites.

The serous discharge must come in with the past one for its consideration, as it is so much one with the aqueous and is only to be differentiated by the various tests brought to bear on it, when it will connect itself with one of the special conditions referred to, more especially that of ascites.

Now, with any of these conditions, what would it avail the patient to have the mucous membrane of the uterine cavity cleaned off, and then smeared over with a more or less noxious topical application, the whole to be preceded, no doubt, by the passage over it of a steel instrument called a "sound"? Fortunately for her, in this case, the pathological conditions are mostly inert; but take it with the first instance, where we have the first stage of an acute cellulitis passed and are now witnessing the transuding of watery fluid from an œdematous uterine tissue, but with the acuteness sufficiently near at hand to be readily awakened and lighted up into a sharp attack, with possibly fatal consequences; for is not the mere passage of a probe a violence done to such a uterus? is not, all the more, an astringent application, for such would surely be chosen in the given case, an offense to a suffering neighborhood? And think of the possibilities were a solution of iodine, however weak, carried to the fundus of such a uterus, the capillaries large, the lymphatics active, the Fallopian tubes erect with congestion, ready to assume violent inflammation on the slightest provocation. And such, unfortunately, is too often the result of like ill-judged treatment.

Many of us may not be made aware of it, and are thus led on to preserve faith in our method. Possibly the patient disappears for a time; it may be a clinic patient, we all see so many of, or have in our time. She will not send for you; she will rather tide over the abdominal pains, possibly even a long confinement to her bed, to save expense. She returns, taking the case to have done well, say after two or three weeks, and tells you of her experience in bed. You find the discharge possibly absent and the patient feeling better, but you make a pelvic examination and discover a firmness where before you had an elasticity and softness little removed from health. Dare you flatter yourself that your patient is really better than when she first came to you? She is innumerable times worse off than before you saw her and made the uterine application.

What was in a process of resolution you have arrested on the threshold, and have dammed up fluids which were the expression of the first inflammatory action. Your treatment has intensified the pathological process; you have been the cause of an effusion of lymph which has now set, and the woman feels better. Of course she does, because the parts which would otherwise be tender by motion are now immovable and everything is one block, so to speak. There is a time to come, however, and that is in the undoing of all this exudation, when the woman is to suffer far more than she could have anticipated, and there is no limit to the pathological developments which your misguided action may have set up.

We picture to ourselves now the lymph thrown out in every direction, not confined to the cellular tissue alone, but also on the peritoneal surface of the various organs, and we imagine it in time contracting, twisting the uterus out of shape, forward, backward, or laterally, the ovaries dragged out of position, the tubes distorted, doubled on themselves and misplaced, the peritonæum itself bound down to the cellular tissue, and held in places where we should scarcely expect it. It would be laying unction to our soul to attribute all this to a slight cold the patient may have contracted. She, poor soul, has, no doubt, accounted for it in that way, and, in all ignorance, returns to her favorite doctor to go on with the case. Let us hope that, once the exudation has been recognized, the treatment will be suited to its removal.

We will now take up the mucous discharges and see in how far they are indicative of uterine disease, and, on the other hand, in how far they are attributable to extraneous causes.

Probably, of all discharges, these are the most frequent; we scarcely ever see a woman who says she has a uterus but we find there some amount of mucus, much or little, thin or thick, easily removed or viscid and tenacious. All these points must be borne in mind when making up our mind as to its import. In the natural condition, I take it, say in a case which has not presented a single symptom and in which there is no history whatever of any exposure to harm, there will be found a slight moisture of mucus, which is the same as on any mucous surface, keeping it in proper condition for its normal function. From that on, any increase is abnormal, and it will now depend on our management of the case whether we do away with it scientifically, or whether we increase the amount, the two results depending upon how we interpret the discharge.

It is such a common thing for the physician, on meeting with such a flux, to at once say, "Oh, yes, some endometritis," and to first remove the mucus, either gently with a cotton pledget held in his forceps or twisted on a stick, or, if gummy and adherent, by a syringe or piece of hard, dry sponge, and then to run his applicator, charged with medicament, up, no matter how far, into the uterine cavity. Is such a course rational? Can we say that there is endometritis, and, if so, is it justifiable to attack a part of the mucous membrane, as that of the body, when in fact it may be absolutely intact and require no interference whatsoever?

To establish in such a case that there is endometritis, we should rather feel positive that we have a decided cause for it and that there is nothing outside which is at the bottom of the ailment, this being merely the symptom.

What in the non-pregnant shall we consider as causes of endometritis? I say non-pregnant to throw out such cases as arise from sepsis during the lying-in period.

We have violence from accidents or from unjustifiable interference, producing solution of continuity, fissures, lacerations, effects of parturition, and of divulsion; we have general blood diseases, as the eruptive fevers or syphilis—chancre; we have, locally, chancroid and gonorrhœa.

Most of these have a history of their own which leads directly to a proper diagnosis, besides following a course which is only for a short time characterized by a mucous discharge passing soon on to the purulent, which, for the moment, withdraws them from our notice.

Now where shall we look for an explanation of the presence of the mucus?

Let us refer to the proposition as set forth in the earlier part of this paper, and consider it as we did then the watery discharge in talking of the first resolution of acute cellulitis; let us look upon this as a result of obstructed circulation, and as an effort of Nature to relieve itself, of the vessels to disgorge, and not as a pathological process.

If this is the explanation, should we not have the discharge always as a watery, or, at the most, as a thin mucous flow? Yes, if we always saw the case in its early stage. Later, and as the cause is maintained, the lymphatics, capillaries, and uterine glands, being constantly called upon to discharge fluid, finally are more and more enlarged; the glands become hypertrophied, and then the material becomes more and more thickened, even to the point of being held in the mouths of the glands, constituting the gummy, tenacious mucus with which we have all had our struggles.

By this time the glands may be said to be diseased, and a probe passed over them will even produce bleeding; but they are still diseased as a symptom, and will resume their natural functions once the disturbing cause is removed.

They are diseased, and we have endometritis or endotrachelitis, and it may also call for treatment, but it is to be borne in mind that it is only as a secondary effect; otherwise the main factor will be overlooked, and the condition will prove intractable or yield only as time has removed the original cause; or, perhaps, as the treatment adopted for the one may by chance have hit at the other, or, again, as in our effort to cure the endometritis by heroic means we may have destroyed the very surface on which the disease has rested, even though, by so doing, we have introduced a still more dreaded element of trouble.

Now, if we look further, and at the conditions which manifest themselves by this mucus, we have a scope embracing almost every one of the pathological conditions pertaining to the uterus and its appendages.

Perhaps the very commonest of pelvic troubles is some slight amount of subacute inflammation about the cellular tissue in the neighborhood of the uterus or upon the peritoneal folds forming its ligaments. These two conditions, if present in however small a measure, produce a certain degree of prolapsus of the uterus; by the fullness of the cellular tissue or the thickening of the uterine ligaments, the one and the other is shortened or contracts, and, by so doing, they bring down the uterus to a different plane from that which it occupies in the normal state. This in itself doubles capillaries and veins upon themselves, stretching others, and congestion is the result. As has been seen before, the congestion, which is passive, seeks its own remedy by an exosmosis, and we have the result in the direction of the freest outlet—viz., the uterine canal, in the form of leucorrhœa. Now, again, if this slight displacement is not recognized—and, being so slight, we may readily understand how it may escape detection—and the ordinary treatment, in this case also, is resorted to; see how absolutely futile it is, how positively harmful. How shall an intra-uterine application of an astringent arrest this flux except temporarily? How is it to be productive of any good effect on the cause of the discharge? And we readily see how, as an irritant, it may be productive of increased harm, unless, indeed, the mucus itself protects the lining membrane from the medicament.

How is it with any one of say a dozen other affections of the uterus or surroundings which are causes of a mucous discharge from the uterine canal, all acting in the same manner—viz., by obstructing the circulation?

Take an anteflexion, congenital or congestive. In the first we must not lose sight of the fact that, although congenital, yet the longer it lasts the more it partakes of the congestive or acquired type, so that we have the symptoms indicating the two forms running together.

In early girlhood—that is, when menstruation is first established—we have an anteflexion from simple disproportion between the body and cervix, and it will not be attended by any mucous discharge; it will require but few menstrual epochs, however, before this symptom will appear, and we have then a congestive condition ingrafted upon the simple primary deformity, and such a condition will remain even after the canal has been straightened by operation.

If long persistent, the glands in this case also have become so accustomed to discharge that they are hypertrophied and give out a viscid mucus. This will require attention, even though the forerunning congestion be already overcome; but I think it will be fully recognized how irrational would be the treatment of the uterine mucous membrane in the first instance.

The consideration of this subject, or rather of the two foregoing—thickening of the uterine ligaments and flexures—opens up a wide field of thought which it would doubtless be of interest to enter upon here, but which, after all, is only a side-issue to the main question we are studying, and must be passed over. Yet it will not be without profit to note the frequent association of the two, and to verify what has been my experience of seeing the congestive dysmenorrhœa and leucorrhœa disappear entirely, and of seeing flexures overcome by treating the thickening in the ligaments alone, ignoring the leucorrhœa absolutely, never even venturing to touch the uterine canal nor to force the organ straight.

The recognition of this relationship would have a still wider interest if we were warranted at the present moment in considering the use of the divulsor for overcoming obstructive dysmenorrhœa, whether of so-called stenosis or of anteflexion, and, again, if we had opportunity to argue the question of the use of stem-pessaries.

Now, to take up some other of the more frequent diseases attended by this same mucous discharge, or, preferably, just to mention them. Consider anæmia and chlorosis; look at versions choking off the return of blood; fibroids bringing an additional supply of blood to the organ and attended by this same symptom from engorgement; polypi acting as foreign bodies within the canal and setting up the leucorrhœa.

Yet these discharges call for no direct treatment; it is misplaced, and it is incumbent on us not to have an error possible, not to be treating such a case for the discharge, and, finally, come up against a uterine growth which may more and more have opened the canal and presented itself to our view, or learn, after numerous visits, that there is, say, a retroflexion, or lateroversion. Such a mishap must place us in a ridiculous light as diagnosticians. Certainly a careful examination and exhaustive differentiation will steer us clear of such pitfalls.

One of the most frequent conditions presenting this symptom, and which often escapes detection, is that of laceration of the cervix uteri. Not such a laceration as any tyro would recognize at a glance, but a concealed laceration—one which has extended, perhaps, in the first instance, through the os externum, but which is now only apparent within the canal, the outer os having healed even so as to appear as if the woman had never borne a child nor had a miscarriage. Such lacerations are much more common than is generally supposed, but, being concealed, must be looked for. Naturally such a lesion produces a pouch, and this remains filled with white-of-egg mucus. Remove it as often as we will, and make what application we will to the walls of the cavity short of destroying them, the discharge will reappear, and will baffle all our attempts to overcome it. There is no endometritis, except the secondary form of enlarged glands, discharging from habit. Yet those cases pass from one to another, and go year after year through the same course without the true lesion being recognized; many and many the uteri which have been made to bear simple and compound applications for a fault which was not theirs, and then without even the little satisfaction of having contributed to a cure of the other part. Naturally enough, no cure can be effected in such a case until the canal is opened up, its edges are pared uniformly, and the lips brought together in nice apposition. We see the same condition exactly when the original operation for repair of a deep laceration has been imperfectly performed, and we see many such—a worse condition fastened on the woman than was her lot before, as this abundant discharge most surely engenders anæmia and chlorosis, followed by an impaired constitution and possibly phthisis.

Now, of the purulent discharges what shall be said? I have previously stated that the mucous discharges are perhaps the most frequent with which we meet, and yet here are the purulent before us, and, as we think over the average cases, they seem common enough, if not as purulent simply, yet with the pus as a dominant element, though the mucus may be present as well.

The purulent discharge is most commonly seen also in old cases of injured cervices, where a laceration has extended pretty well into the tissue of the cervix, and the surfaces thus exposed, which are similar to those in granular lids, have continued to generate pus from the date of the initial lesion. Be it understood this is the case, other circumstances favoring it—namely, impaired constitution, anæmia, subinvolution, prolapsus, etc.

Such conditions are so common that every practitioner must have seen a number. Shall we here treat the parts because of this pyogenic state? Most assuredly we may; it is a local lesion, and may be largely overcome while still we are busying ourselves about the more general state which has such a positive bearing upon it.

It is precisely because of these cases being so common, and their treatment being so self-evident, that we are in danger of error by overlooking other conditions which are simulated by it or which it masks—for instance, a venereal ulcer situated high up in the uterine canal. The discharge will be the same, but how much benefit will attend the true disease if we are directing our attention to the supposed surgical lesion of the uterine canal? And the very application which would prove serviceable in the one case—viz., nitrate of silver or acid nitrate of mercury—we would strenuously shun in the other.

How necessary it is, then, to do nothing by routine! Every day we hear at the clinics "Oh, yes, endometritis," and in goes the swab or applicator charged with iodine, Churchill's tincture, without so much as a thought being directed to the patient, much less a further examination to determine beyond peradventure that the diagnosis is a correct one.

Again, with an old laceration and subinvolution, the uterine canal containing pus, the same treatment pursued as indicated above; no improvement; recurrent attacks of pain and febrile symptoms, when a more perfect examination leads us to an old pelvic abscess or a chronic oophoritis which is discharging its contents by the Fallopian tube, and so through the uterine canal. These cases have been known, and it is not too much warning to throw out to practitioners who will do a little gynæcology to tell them to be on the lookout and make an accurate diagnosis.

It may be thought that this subject has reached its limit, and that to pursue it further into the consideration of the sanguineous discharges will prove fruitless, or, rather, it may seem self-evident to the large majority that such discharges speak for themselves, and that no erroneous plan of treatment can possibly be entered upon once such a condition presents itself.

My object here is not to point out what may be errors of diagnosis so much as it is to insist upon not mistaking a general or common symptom for a disease in itself. For instance, a muco-sanguineous or a sanguineo-purulent discharge is common enough in a variety of affections, and it should ever be our aim to ascertain positively what it proceeds from rather than whence it proceeds. If we have pure blood flowing, it is needless to tell a physician not to dwell upon a condition of the uterine mucous membrane and content himself with making applications to it. Each and every one will have sought the cause: a displacement, a fibroid, granulations or fungous growths along the line of the canal, obstructed portal circulation through pressure or mitral regurgitation, breaking down of a vessel from ulcerative process, etc. Yet it is right to enjoin upon all to recognize that some such cause lies behind and is at play in every case, though the blood be not in sufficient quantity always of itself to call for the exhaustive examination.

At a time when the uterine probe was in more general use—unfortunately, it is still too much handled to-day—it was the commonest thing to see an exploration followed by a drop of blood or two. What did it mean? No one inquired, and only one in many would inquire to-day. But the solution of iodine is passed in just the same, it may be to do good, but much more likely is it fruitless. The mere fact of using an astringent does argue that we consider the mucous membrane congested, but why should we, even in so small a measure, seek to reduce this congestion, which is nothing *per se*, but is the expression of something much more significant? It is true the cause is at times located in the mucous membrane itself—fungous growths, for instance—but many more times does it depend upon a general engorgement of the pelvic vessels, and thus of the uterus also, in which case we are glossing over the surface of vessels and are as remote from dispelling the true condition as if making use of a medicated inhalation for the relief of a pulmonary congestion.

Now, to conclude, pelvic disorders in general have as a common symptom a uterine discharge, more often cervical than corporeal, due to the level on which pelvic inflammations usually are—namely, the cellular tissue of the floor of the pelvis.

This condition is too often considered as the disease, and is treated as such, as evidenced, beyond what has been said above, by the practice of some who will even dilate the cervix and inner os for the purpose of making applications when it is self-evident that, if there is any disease in the canal, the os internum will be patulous and the canal perfectly free.

Intra-uterine applications, if misdirected, not only fail to do good, but are harmful. Witness the average time of getting patients well, which is considerably shorter, not using intra-uterine treatment, thus avoiding relapses due to our own misjudgment.

Endometritis is not the common ailment that the daily talk of it would lead one to suppose.

THREE CASES OF THYREOTOMY;

RECOVERY IN EACH CASE, WITH EXCELLENT VOICE.*

By CLINTON WAGNER, M. D.

THYREOTOMY is indicated in all cases in which distressing dyspnœa is present from laryngeal obstruction, and for the relief of which the operation *per vias naturales* is impracticable. I have no suggestions to offer as to the method of performing the operation, except that I regard silver sutures through the thyreoid, for the purpose of maintaining the divided eges of the cartilage in apposition, after the operation, as quite unnecessary. I employed them in my first two operations, but have since abandoned them. The skin should be brought together by sutures aided by plaster. If this is done carefully and properly, the divided edges of the cartilage will be kept firmly in position, the skin serving as a splint.

In subjects over forty-five years of age I have almost invariably found ossification of the cartilage. A small file-cut wheel, made to revolve by means of the dental engine, will be found in many respects better than the small convex saw generally used; the line of division will be smooth and clean and more easily maintained in the median line, and there will be less difficulty in steadying or fixing the larynx during the sawing process. No evil effects follow the division of the crico-thyreoid membrane and cricoid cartilage; I have usually divided both in my operations; more room or space is gained thereby, especially in very young children, and the growth or membranous web can be removed more easily and thoroughly.

I have performed the operation nine times; with the exception of the three cases which form the subject-matter of this paper, all were for the removal of malignant growths occurring in adults, and the destruction of the vocal cords was a necessary step in the operations.

I do not regard thyreotomy as dangerous to life; hæmorrhage usually is very slight, and can be easily controlled by compression. I can not recall an instance in which I applied a ligature. Fauvel,† however, in one of his operations applied thirty-eight.

CASE I.—Georgie, aged five years, was admitted into the Metropolitan Throat Hospital suffering from alarming dyspnœa, with frequent attacks of spasm of the glottis. An examination revealed a large papilloma attached to the right cord and almost completely filling the box of the larynx, and between the cords posteriorly could be distinctly seen what appeared to be a web of membrane stretched from cord to cord. As the child was greatly reduced in flesh and strength, thyreotomy was at once decided upon. Tracheotomy was first performed, followed immediately by the thyreotomy. The growth was removed, the membranous web cut away with the scissors, and the patient put to bed. The membranous web was the result of an attack of diphtheria or croup, which he had had some months before. The boy recovered perfectly and gained rapidly in strength and flesh; was discharged from the hospital five weeks after the operation.

I saw him six years after the operation. There had been no recurrence of the growth, the vocal cords appeared normal in appearance and action, and the voice was excellent.

CASE II.—A boy between three and four years of age was attacked with diphtheria at the Foundling Asylum. Tracheotomy was performed by Dr. G. M. Swift, at that time house surgeon of the institution. The child recovered from the diphtheria, and in due time an attempt was made to dispense with wearing the cannula. Dyspnœa followed and the tube was reinserted. Numerous attempts were subsequently made with the same result. Five months after the tracheotomy was performed, I was requested to give my opinion as to the cause of dyspnœa upon removing the cannula. Owing to the resistance made by the child, I was unable to obtain a very satisfactory view of the larynx. I gave as my opinion that there was laryngeal obstruction, probably a membranous web, the result of the ulceration of diphtheria. I suggested thyreotomy, and was requested to take charge of the case and perform the operation. I found below the vocal cords and just above the inferior border of the thyreoid a membranous web stretched across the larynx and occluding at least the anterior two thirds of its lumen. This was removed carefully by means of scissors and knife, after which I had no difficulty in carrying my index-finger through the glottis into the mouth. The wound healed kindly, twelve days after the operation; the cannula, which he had worn for nearly six months, was removed. Two years later the child, well and strong, with a good strong voice, was sent from the asylum to a home in the West which had been provided for him.

CASE III.—A girl child, aged three years, was admitted into the Metropolitan Throat Hospital suffering from alarming dyspnœa with frequent attacks of spasm of the glottis, caused by a large papilloma attached to the left vocal cord. Tracheotomy was performed, but during the operation a large vein was cut, which bled profusely; the prostration from hæmorrhage was so great that I was compelled to defer thyreotomy for two weeks; it was then performed in the usual manner. The patient was discharged from the hospital at the expiration of two months, but attended my clinic as an out-door patient, and was kept under observation for six months longer.

I saw the patient last in October, 1885, nineteen months after the operation; she was at that time in perfect health, and her voice seemed clear and strong.

Cases I and II were reported at length shortly after the operations ("Med. Record," October, 1879, and "Archives of Laryngology," July, 1883); they are again referred to, merely to show the improvement in the vocal functions after an interval of several years.

The membranous web is a sequel of healing from destructive ulceration of the mucous membrane occurring simultaneously on opposite sides of the larynx. It is not infrequently found as a result of the deep-seated ulceration of tertiary syphilis. In my opinion, it occurs more frequently as a result of laryngeal diphtheria than is generally supposed, although the two cases above detailed are the only instances I have encountered in my practice. I have no doubt it would be frequently seen in laryngeal tuberculosis and cancer could *healing be brought about by any means.* In the adult the web may be destroyed by the galvano-cautery, the laryngeal knife, or Whistler's ingenious cutting-dilator, but in very young children thyreotomy is our only means for affording radical relief.

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* Read before the American Laryngological Association at its eighth annual congress.

† Quoted by Mackenzie, "Diseases of the Pharynx, Larynx, and Trachea," p. 241.

RABIES, AND HOW TO PREVENT IT.*

By VALENTINE MOTT, M. D.

(*Concluded from page 464.*)

For over five years experiments have been going on in the laboratory of the École Norman in the rue d'Ulm, Paris, seeking to attain this great end—the prevention of rabies—and this end has been attained. The master mind in prophylactic treatment and destruction of disease was at work, and he who discovered the principles of acetic fermentation, the cause and means of prevention of the silk-worm sickness, inoculation as a prevention of anthrax, etc., has given the world one more great gift and put all nations in his debt. This method is no child of the moment. Pasteur has given it years of thought and rigid research, and it now shines forth triumphant in its success, a blessing to humanity.

On the 30th of May, 1881, Pasteur, in conjunction with his assistants, Chamberland, Roux, and Thuillier, made a report to the Academy of Sciences that, despite previous experiments to the contrary, the spinal cord, and more especially the medulla oblongata, contained the specific rabic poison; and that, in order to render the inoculation more certain, the poison should be injected under the dura mater by means of trepanation, and not subcutaneously. At the same time, by this method the period of incubation became more fixed, not exceeding three weeks.

More than a year afterward (December 11, 1882) Pasteur and his collaborateurs made a further report, promulgating the following facts:

I. Dumb madness and furious rabies—in fact, all kinds of rabies—proceed from the same virus.

II. The symptoms of rabies are infinite in variety. Each case has its own, and their character depends on the nature of the points of the nervous system—brain, spinal cord—at which the virus localizes itself and is cultivated.

III. As in the rabic saliva the virus is found associated with different microbes, its inoculation may give rise to death in three ways: 1. Death by rabies. 2. Death by (pyæmia) excessive development of pus. 3. Death by reason of the microbes which he had made known as the saliva microbes. In December, 1880, he had inoculated two rabbits from the saliva of a child who had died mad in the Hôpital Sainte-Eugénie. These rabbits died in thirty-six hours; others inoculated from these died, and so on through several series. A microbe was discovered in the blood. Subcutaneous injections of this blood failed to produce madness in dogs. He first supposed this to be the microbe of rabies, but soon determined that this was not the case, as it was found in the saliva of a healthy man, and rabbits inoculated by M. Vulpian with it died.

IV. The medulla oblongata of people and animals who have died of rabies is always virulent.

V. Rabic virus is found not only in the medulla, but also in the whole or part of the encephalon. It is found localized in the cord, and often in all parts of the cord. The virulence in the cord equals that in the medulla or portion of the encephalon. Virulence remains as long as putrefaction does not set in. The virulence of a rabic brain was kept for three weeks at a temperature of 12° C.

VI. To develop rabies certainly and rapidly, inoculation must be made on the surface of the brain under the dura mater by means of trepanation. These results are also obtained by intra-venous injection. Madness often declared itself in six or seven days.

VII. Rabies brought on by intra-venous injection differs often from that produced by bites or trepanning. It is possible that many cases of this silent madness have been passed over. In these cases of medullary rabies prompt paralysis is frequent, fury often absent, rabic howling rare, while, on the other hand, frightful itching and tearing take place. Our experiments have led us to the conclusion that in intra-venous inoculation, as far as we can determine, the spinal marrow is first attacked—that is to say, the rabic virus first fixes itself there and is propagated.

VIII. Inoculation of rabic saliva or blood not followed by death in intra-venous injection in the dog does not protect against subsequent madness and death upon a fresh inoculation of pure rabic material introduced by trepanation or intra-venous inoculation.

IX. Cases of spontaneous cure are met with after the appearance of the first symptoms, never after the severe symptoms have appeared. In certain cases the severe symptoms appeared much later and were followed by death.

X. In one case, out of three dogs inoculated in 1881, two died shortly of rabies, and the third, after having shown the first symptoms, got well. This dog, although reinoculated by trepanation twice in 1882, did not become mad.

XI. Three other dogs could not be made rabid even with the strongest virus. Did these become refractory by reason of a mild rabies cured, or is it that some are naturally so?

These propositions are the result of over two hundred experiments on dogs, rabbits, and sheep. In this report Pasteur first propounds the idea: It is possible to render man refractory to rabies. In his communication to the Academy of Sciences, dated 25th of February, 1884, Pasteur reaffirms his statements made December 11, 1882, and amplifies them, giving the results of various experiments verifying them. He announced that he had succeeded in rendering dogs refractory to rabies. The virus was found located also in the nerves of the periphery as well as in the central nervous system and salivary glands.

That different quantities of virus inoculated gave rise to different symptoms, a small quantity to furious rabies, a larger quantity to dumb rabies. Attention is then called to the fact that the discovery of the attenuation of a virus, and the application made of this fact to prophylaxis in certain diseases, had brought to light this fact of the possible experimental production of different grades of virulence of a virus.

Rabies is essentially a disease produced by a virus. Can different degrees of rabic virus be obtained? The answer is Yes. In different animals the virulence varies, and, passing it from one animal to another of the same species, it finally becomes of fixed strength.

On the 19th of May, 1884, the following fact was announced: In passing the rabic virus from monkey to monkey it gradually becomes lessened in strength, so that finally it is incapable of giving rabies to a dog by hypodermic injection. With rabbits, on the contrary, the virus increases in strength in passing from one to another, and finally it reaches a fixed period of incubation of seven days.

Pasteur now declared that he had arrived at a principle of rendering dogs refractory to madness, and asked the Minister of Public Instruction to appoint a commission to examine and report. The commission was appointed as follows: Messrs. Béclard, P. Bert, Bouley, Tissorand, Villemin, and Vulpian.

They reported, August 6, 1884, as follows: Of the 19 dogs experimented on, 3 out of 6 bitten by rabic dogs died, 6 out of 8 subjected to intra-venous inoculation of rabic material died, of 5 inoculated by trepanation, all died. Of the 23 vaccinated dogs (rendered refractory by Pasteur), none were attacked by rabies. One died of diarrhœa on the seventh day; however, to be certain that it had not died of rabies, three rabbits and a guinea-pig were inoculated from its cord and did not become mad.

On the 25th of October, 1885, Pasteur made the report to the Academy in which he announced his treatment as applied to human beings, and its application to the case of Joseph Meister some time previous. In addition to the principles mentioned above, the following are intimately connected with this process:

The inoculation under the dura mater of a rabbit by means of trepanation with the rabic cord of a dog dead of ordinary rabies produced rabies in about fifteen days. If the virus of this rabbit is passed to a second, and from this to a third, and so on, there soon is a decided tendency for the period of incubation to shorten; after twenty-five passages the period of incubation becomes eight days, and finally, after twenty-five more passages, seven days; here it remains fixed; after a hundred and ten passages some showed signs in six days. These cords are virulent in their whole extent.

If short pieces of the cord are taken and suspended in sterilized jars, in which the air has been rendered dry by means of small pieces of caustic potash placed in the bottom, the virulence will disappear little by little until it is entirely extinct, depending upon the length of time kept, the temperature, and the thickness of the cord. These results constitute the scientific point of the method. The cord is dissected each day from a rabbit dead that day, and carefully put away in jars. Each day fresh rabbits are inoculated with the virus taken from rabbits dead that day, so as to keep up the series. In order to induce the refractory state in man or animals, successive inoculations are made, beginning with a virus sufficiently old to have lost all its strength, and day by day increased till that which is finally given if it had been first given would have produced rabies. In order to introduce the poison into the system, a very small piece is rubbed up with sterilized broth and introduced under the skin by means of a hypodermic syringe in the hypochondriac region.

Originally Pasteur began with virus fifteen days old—that is, having been kept in the desiccating jar that length of time—and finished with virus one day old, giving thirteen inoculations in ten days. Now he begins with fourteen-day-old virus and ends with five-day-old, one inoculation being given each day.

The view on which the treatment of those bitten is maintained is as follows: The ordinary period of incubation after the bite of a rabid dog being about six weeks, if we can before that time institute a refractory state in man, the poison will not act. Inoculations with the strong virus taken from the rabbit do this in a shorter time, so the rabies produced by the dog-bite is warded off. The system has become accustomed to the poison by gradually increasing the strength of the dose thereof.

This foundation principle is sound, and the application is possible so long as we are able to get a diminution in the strength of the virus. These problems have been worked out by Pasteur, and practically applied with success.

Let us look for a moment at some statistics given by Dr. Grancher, who has performed Pasteur's inoculations on human beings for him. The report was made in June, but, the period of incubation in rabies derived from the dog-bite being long, only the cases up to April 22d were taken.

The cases were divided into three classes:

First class: Those bitten by dogs proved to be mad by inoculation of rabbits, or subsequent development of rabies in animals bitten by them—ninety-six cases, one death.

Second class: Patients bitten by dogs certified to be rabid by the veterinary practitioners of the locality—six hundred and forty-four cases, three deaths.

Third class: Those bitten by dogs who had run off and not been seen again—two hundred and thirty-two cases, no deaths.

In the first two classes seven hundred and forty cases, with three deaths, not quite $\frac{1}{2}$ per cent. of those bitten, while the ordinary statistics of like cases given by M. Leblanc, veterinary surgeon of the city of Paris, give 16 per cent. as the number of deaths.

Dr. Brouardel has calculated that no less than 80 per cent. of those bitten by rabid dogs on exposed parts of the body die.

In the eighty-four cases of wolf-bite not included in the above, seven died; ordinarily 66 per cent. of those bitten by rabid wolves die, and here the percentage is fourteen.

Looking at these facts, shall we not say the principles and methods are a success?

During the month of April last I visited Pasteur's laboratory as the representative of the American Pasteur Institute. I was kindly received by him and his assistants, and everything in the process of his method of inoculation shown me, from the primary trepanation and introduction of the virus under the dura mater of a well rabbit to the inoculation of the human being with the spinal cord of a rabbit which had died with rabies. All the steps were shown me; nothing was concealed. On my leaving Paris, a rabbit inoculated that day was given me. This rabbit was my constant care for the next nine days, when it died, having developed signs of paralysis two days before. I immediately placed the body on ice, and on the next day, when I had arrived here, the spinal cord was dissected out, and the work of propagating the virus begun. Rabbits were inoculated every day for several days, the cord being kept in carbonic-acid gas at a low temperature. Those rabbits developed rabies in due course, and after a time a series was established, and the work was begun on the human being. In the first case, unfortunately, the patient's health was such that his parents discontinued the inoculations after the fourth. The trouble did not arise from the inoculations, but from a series of accidents which happened to the lad (who was only seven years old) immediately before the beginning or during the time of the inoculations, he having been hit with a stone and badly cut; having fallen down the elevated-railroad stairs, which was followed by severe epistaxis; having cut his wrist and a good-sized branch of the ulnar artery, so that there was a great deal of hæmorrhage, as well as having suffered severely from the bite.

In the second case the inoculations were taken through the whole series; the patient is doing well, not having suffered any inconvenience from the treatment. The same may be said concerning the third and fourth cases.

In two out of the three last cases the dogs were undoubtedly mad, all the symptoms pointing that way. In the other case there were sufficient indications to warrant the treatment, especially as the parents were anxious to have it done.

I have also inoculated myself as a means of prevention. A number of people have come to me at various times, having been bitten, wishing to know if inoculation was necessary, in many cases much frightened and in an excessively nervous state. I have been able to allay their fears, assuring them, from the detailed circumstances, of the absolute absence of danger, and, after some slight treatment for their nerves and dressing of the wounds, they have gone home happy and contented.

Many more points in the study of rabies might be brought forward, for it is a subject replete with interest and worthy of research. If, however, I have succeeded in implanting in your minds a few of the points concerning it, and a belief in the efficacy of the method of inoculation as a means of prevention, I shall be satisfied with my success.

Correspondence.

LETTER FROM NEW ORLEANS.

The Fever at Biloxi.—The Medical Department of Tulane University.—Charity Hospital.

New Orleans, *October 1, 1886.*

The fever which appeared during the latter days of August in the sea-coast town of Biloxi, Miss., eighty miles from New Orleans, has occasioned great excitement and alarm, on account of the Louisiana State Board of Health's having decided that it was yellow fever, and not, as the local physicians had diagnosticated it, malarial or bilious remittent fever of a mild type. If the Louisiana board erred, it certainly erred on the safe side. Of the ten persons attacked at the outbreak of the disease, in two houses twenty-five yards apart, before any disinfection had been undertaken, two died. One of the deceased, Mrs. Rhodes, was taken sick at eleven o'clock at night, August 25th, with violent headache, pain in the back and limbs, high fever, nausea, and vomiting, and she afterward became somewhat delirious. After two days' duration of the fever, she had a distinct remission and two convulsions, vomited, without much exertion, a black liquid (although on this point the tesitmony is contradictory), and shortly died, on the fourth day of her illness. After death the body was jaundiced, and there were ecchymotic patches about the face and neck. On the day of the funeral, Sunday, the 29th, I happened to be in Biloxi, and heard the rumors that the lady had died of yellow fever.

The other patient who died was a girl, fifteen years old, who was taken with fever, headache, nausea, pain in the back, and general malaise on the 24th. On the third day there was a distinct remission of the fever, and, after passing two days in a state of quiet, she died. Her parents stated that she lay in a drowsy condition during the last hours of her life. In the cases of those who recovered, the symptoms were much of the same general character; it is hardly possible to give the details, because, as has been published, the attending physician "took no notes nor kept any clinical record, not dreaming of any such thing as yellow fever in cases so obviously plain and simple."

To sum up: Eighteen persons were taken sick with a suspicious fever; nine in one household, four in another twenty-five yards away, and the rest so near that all were within a circumference of three hundred yards; one of the dead bodies showed the external appearances of yellow fever; there were rumors of communication between the quarantine station and the focus of the disease; and the place was in a healthy condition after thorough disinfection.

The next regular course of lectures in the Medical Department of Tulane University begins on the 15th of November, and lasts until the 26th of March. Although this school is a department of the university, it carries on its business entirely apart from the three other departments. Dr. J. F. T. Paine, professor of materia medica, therapeutics, and hygiene, has resigned, and Dr. A. B. Miles, resident house surgeon at Charity Hospital, has been appointed to succeed him, but will continue to fill his hospital position.

At the last session of the Legislature, $50,000 for 1887 and $40,000 for 1888 were appropriated toward the expenses of Charity Hospital, but with the proviso that only Louisianians should be admitted to compete for the position of resident student. This condition, I fear, will operate to the disadvantage of the medical college, which depends largely for its patronage on the students who come from the neighboring States in the hope of being appointed resident students of the hospital.

THE
NEW YORK MEDICAL JOURNAL,
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THE PATHOLOGY OF PULMONARY EMPHYSEMA.

A noteworthy paper was read before the New York Academy of Medicine, at its recent annual meeting, by Dr. Francis Delafield, which did much toward clearing up some of the obscure points that have long lingered around the common disease known as chronic pulmonary emphysema. According to the theories generally accepted, dilatation of the air-spaces and rarefaction of the pulmonary structure make up the essential features of the affection. This theory has frequently failed to satisfy the pathologist, because his search at the post-mortem table has not always been rewarded by finding the traditional condition of the air-spaces said to belong to the disease which the skilled clinician has diagnosticated.

It will be seen by the abstract of Dr. Delafield's paper which we shall publish hereafter that the form of chronic emphysema which, for him, has the greatest clinical importance is the substantive; and this he describes as a chronic inflammation of the lung, with dilatation of the air-sacs and air-passages as a secondary change. Dilatation of the air-spaces, therefore, is not the essential lesion of the disease, and Dr. Delafield has been led to this view by his microscopical examinations of the lungs of patients who have died with an unmistakable clinical history of chronic pulmonary emphysema. In many cases these lungs have shown but very little change affecting the walls of the air-sacs, because the blood-vessels could be readily injected artificially. The fact that there was neither marked dilatation of the air-spaces nor any special mechanical obstruction to the circulation led him to cast about for an explanation of the general venous congestion and other distressing symptoms, and he has queried whether or not they may be due to contraction of the small arteries and capillaries in the lungs. He believes that this question has been answered in the affirmative by the results of administering drugs which act by causing relaxation of the small arteries and capillaries. This is not an unreasonable conclusion, although one of the gentlemen who took part in the discussion said it was impossible to prove that contraction of these blood-vessels occurred.

It appears that some of the speakers overlooked the fact that the author of the paper intended to illustrate by his specimens the lesions of chronic inflammation of the same character as that which invades the endocardium and the lining of arteries, together with the nearly normal condition of the blood-vessels found in the lungs of persons dead of chronic pulmonary emphysema. These two conditions constituted the foundation upon which his argument rested, and the intimation that the illustrations showed merely a combination of diseases, rather than substantive emphysema, was rather uncalled for.

THE EQUINE ORIGIN OF TETANUS.

A practitioner of Libourne, in France, who states that tetanus is rare in that locality, has written M. Verneuil a letter, in which he says that he has observed three cases of the disease there, one of which was that of a dragoon who wounded his foot in a chase after a runaway horse, and another that of a man whose injury was produced by the bite of a horse. The letter is published in the "Gazette hebdomadaire de médecine et de chirurgie," the same journal in which, as our readers are aware, M. Verneuil lately broached his theory of the equine origin of tetanus.

On the other hand, in a subsequent issue of the same journal, M. Saint-Vel adduces a number of facts that are hard to reconcile with M. Verneuil's theory, or at least with the assumption that it holds good invariably. The writer first alludes to his own observations in early life, when, living in a region where tetanus was much more prevalent in man than in the horse, he knew of a number of cases. He then calls attention to the frequency of tetanus in Oceanica, although on many of the islands the horse is unknown, and recalls the case of the frigate Pearl, which anchored in the Bay of Carlisle, Island of Santa Cruz, on the 12th of August, 1875. Those of the ship's company who landed were received by the natives with arrow-shots, and the commodore and five men were wounded. None of the wounds were serious in themselves, but the medical officer, bearing in mind the frequency of tetanus in the tropics, advised the commodore to try to make Australia. On the 17th, the northern point of New Caledonia being abeam, the commodore was attacked with tetanus, and died on the 20th. Two young seamen also died, one on the 18th and the other on the 21st—both of tetanus. Another case was that of a young sailor who injured his foot while handling a cannon on shipboard in the roadstead of Ajaccio, and was attacked with tetanus on the twenty-second day. Finally, after the French attack on the forts of Petropaulowski, four cases of tetanus showed themselves among the wounded—three on one vessel and one on another.

Our readers will remember that M. Verneuil alluded incidentally to the rarity of tetanus at sea in support of his theory of the origin of the disease from the horse. But, even if we grant that, in general, its occurrence on shipboard is unusual, it must be admitted that a single instance will suffice to set the equine theory aside in that particular case, unless we fall back on another of M. Verneuil's suggestions—that the period of incubation may be extremely prolonged. However, stretch the possibilities in this direction as we may, the supposition that all three of the victims on board the Pearl, who died within the space of three days, after recent wounds received at the same time, succumbed to a disease acquired from the horse before the vessel left home, becomes so improbable as to border on the absurd. It must be said, therefore, that the naval observations adduced by M. Saint-Vel go far toward vitiating what little there was of a convincing character in M. Verneuil's presentation of his views.

MINOR PARAGRAPHS.

THE WARD'S ISLAND INVESTIGATION.

The committee of the Board of Commissioners of Immigration, having concluded its investigation, has come to a conclusion which can not be construed as at all dishonorable to the medical officers against whom the charges were preferred. As concerns the main charge, that of allowing ill treatment of the dead, it was shown at an early stage of the investigation to have little else to rest on than the statements of a disaffected employee. When this had been practically disposed of, various minor allegations were brought up, of different degrees of triviality and vexatiousness, but no graver conclusion seems to have been reached than that which prompted the declaration of the committee's opinion that it was improper for medical men, especially those not members of the staff, to take morbid specimens away with them by the pailful. In view of the satisfactory termination of the inquiry, nobody's equanimity is likely to be disturbed by a commissioner's assertion that the immigrants are not paupers, because, forsooth, those that die are not buried in the Potter's Field, but in a special cemetery provided by the board (that is, at the expense of the public).

THE "JOURNAL OF COMPARATIVE MEDICINE AND SURGERY."

We lately called attention to certain changes in the editorial staff of this excellent journal. The promise which those changes gave of an improvement in the contents is amply borne out in the October issue, in which we find instructive articles by Mr. John Bland Sutton, of London; Dr. R. W. Shufeldt, of the army; Professor Law, of Cornell University; Mr. Richard W. Burke, of India; Dr. G. Archie Stockwell, of Port Huron, Mich.; and Mr. James A. Waugh, of the army. In addition, the number contains several interesting editorial articles, in one of which a deserved tribute is paid to Dr. Spitzka's zeal and ambition in originating the journal; also short clinical contributions, reports of society proceedings, abstracts, and reviews. Improvement is shown in the appearance of the journal as well as in its contents; the paper is of good quality, the print is clear and attractive, and the illustrations, including wood-cuts, photo-engravings, and four figures in chromo-lithography, are admirable.

ITEMS, ETC.

Infectious Diseases in New York.—We are indebted to the Sanitary Bureau of the Fourth Division of the Health Department for the following statement of cases and deaths reported during the two weeks ending October 26, 1886:

DISEASES.	Week ending Oct. 19.		Week ending Oct. 26.	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever	45	11	30	10
Scarlet fever	28	2	31	3
Cerebro-spinal meningitis	2	1	1	1
Measles	98	8	103	8
Diphtheria	66	34	99	45

Small-pox in Brooklyn.—It is reported that the disease, which originated two weeks ago in a fatal case, occurring in a thickly settled portion of the city, has extended, and that eight persons who lived in the neighborhood have been attacked.

The Blackwell's Island Training School.—The tenth annual commencement of the training school of the Charity and Maternity Hospitals was held on Tuesday. Diplomas were awarded to twenty-four young women.

The Cumberland, Me., County Medical Society.—At the regular meeting, held at Portland on Thursday last, Dr. Israel T. Dana read a paper on the "Diagnosis and Treatment of Inflammations of the Cæcum."

Ireland and the International Medical Congress.—"In addition to Sir William Stokes, president of the Royal College of Surgeons in Ireland," says the "British Medical Journal," "whose appointment as a vice-president of the International Medical Congress of next year was noticed in the Journal, last week, Dr. Banks, Regius Professor of Physic in the University of Dublin, and the prospective president-elect of the British Medical Association, has also been enrolled as a vice-president. Dr. John William Moore, a well-known Dublin physician, meteorologist, and sanitarian, has likewise been made a vice-president of the Section on 'Medical Climatology and Demography.' We are glad to hear of these honors, looking upon them as compliments to the profession in Ireland in the person of some of its representative members. At first it looked as if Ireland was going to be ignored; for in the list of officers of the Congress that was recently published the name of one Irish medical man only appeared."

Diphtheria.—It is reported that a malignant type of the disease is epidemic in Darrington, a suburb of Lynchburg, Va., and that a number of deaths have occurred.

Society Meetings for the Coming Week:

Monday, *November 1st:* New York Academy of Sciences (Section in Biology); Medico-Chirurgical Society of German Physicians; Morrisania Medical Society (private); Brooklyn Anatomical and Surgical Society; Utica, N. Y., Medical Library Association; Boston Society for Medical Observation; St. Albans, Vt., Medical Association; Providence, R. I., Medical Association; Hartford, Conn., City Medical Association; Chicago Medical Society.

Tuesday, *November 2d:* New York Medical Union (private); Medical Society of the County of Rensselaer, N. Y.; Newark, N. J. (private), and Trenton N. J. (private), Medical Associations; Hampden, Mass., District Medical Society Springfield).

Wednesday, *November 3d:* New York Pathological Society; American Microscopical Society of the City of New York; Medico-Legal Society; Medical Societies of the Counties of Albany and Cayuga, N. Y.; Pittsfield, Mass., Medical Association (private); Philadelphia County Medical Society (conversational).

Thursday, *November 4th:* New York Academy of Medicine; Society of Physicians of the Village of Canandaigua, N. Y.; Medical Society of the County of Orleans, N. Y. (annual—Albion); Boston Medico-Psychological Association; Obstetrical Society of Philadelphia; U. S. Naval Medical Society (Washington).

Friday, *November 5th:* Practitioners' Society of New York (private).

Saturday, *November 6th:* Clinical Society of the New York Post-graduate Medical School and Hospital; Manhattan Medical and Surgical Society (private); Miller's River, Mass., Medical Society.

OBITUARY NOTES.

Edward T. Whittingham, M. D., of Millburn, N. J., son of the late Bishop Whittingham, of Maryland, died October 26th, in the fifty-sixth year of his age. He was born in Millburn, April 22, 1831, was graduated from the Medical Department of the University of Maryland in 1852, and after a brief residence in Baltimore he settled in Millburn in 1854. April 16, 1862, he was appointed assistant surgeon in the United States army, and resigned November 12, 1863. He was a member of the Essex County Society and of the Essex Medical Union, and was formerly a member of the Medico-Chirurgical Society of Maryland.

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Proceedings of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Meeting of September 22, 1886.

The President, Dr. John A. Wyeth, in the Chair.

Multiple Fracture of the Pelvis and Rupture of the Bladder.—Dr. George F. Shrady presented the pelvic bones and bladder of an Italian who had been crushed laterally between two cars. Twenty-four hours after the accident, fracture of the pelvis and rupture of the bladder, with extravasation of urine, were recognized. An exploratory operation was performed, beginning with perineal section, and including both median (perineal) and suprapubic cystotomy. The rupture was found to be below the peritoneal line. A fracture was recognized at the junction of the pubic and ischiadic bones, and there were some evidences of fracture at the right sacro-iliac synchondrosis. The patient did well for twenty-four hours after the operation, but died on the fifth day as a result of the severity of the injury and the extent of urinary extravasation which had taken place. At the autopsy the fractures at the ischio-pubic junction were found to be eight in number. There were two ruptures of the bladder, one on either side.

Chronic Diffuse Nephritis; Cardiac Hypertrophy.—Dr. Frank Ferguson presented the brain, stomach, heart, and kidneys of a man, aged fifty-eight, who had died after having had great dyspnœa, fluid in the pleural cavities, and other symptoms dependent upon renal and cardiac disease. The specimens, which were quite fresh, showed great hypertrophy of the left ventricular wall, with granular degeneration of the muscular fibers, the lesions of chronic diffuse nephritis, marked congestion of the stomach, and atheroma of the arteries at the base of the brain.

Cerebro-spinal Fever.—Dr. J. Lewis Smith presented the brain of a child which had died, aged twenty-seven months, at the Foundling Asylum, of a second attack of brain trouble, the first attack having preceded the second by three weeks. On the third day there were well-marked *taches cérébrales*, and the speaker called attention to their diagnostic value in doubtful cases.

Retroperitoneal Hæmatoma.—Dr. H. N. Heineman presented specimens from a married woman, aged thirty-six years, who had entered Mt. Sinai Hospital September 3d. Three weeks prior to her admission she was suddenly seized with cramps in the abdomen, and since then had had continued pains. Examination revealed a hard mass in the right iliac region. On the 9th the mass had increased in size, and the patient was sinking. The urine contained numerous granular and hyaline casts. On the 10th she died. A firm mass was found just anterior to and below the promontory of the sacrum, projecting into the pelvis, and bound down below and on either side, consisting of a blood-clot hemmed in below and laterally, but extending above behind the peritonæum. The blood had found its way behind the peritonæum covering the kidneys, the liver, the lateral walls of the mesentery, the small and large intestine, and the meso-rectum. In the right mesocolon a large accumulation of blood, weighing nearly two pounds, was found. The blood about the right kidney had firmly coagulated, forming a cast of the kidney. In this region a slight rupture had allowed a small quantity of blood to escape into the abdominal cavity. The mucous membrane of the bladder showed signs of acute inflammation. The kidneys were large, pale, and granular. The uterus contained the remains of a forming placenta, and the mucous membrane was slightly lacerated. An interesting feature in the case was the continuance of the hæmorrhage for several days.

Cerebral Apoplexy; Repeated Hæmorrhages.—Dr. Heineman also presented the brain of a man, aged twenty-one, who was admitted to Mt. Sinai Hospital July 9th. That morning he had suddenly been seized with convulsions and unconsciousness, from which he gradually recovered. He had at times had headache. There were systolic apex and pulmonic murmurs. The patient was dull, but there was no paralysis. On the 14th he left the hospital without any symptoms of disease, but weak. Three or four days later he began to complain of frontal headache, pain in both eyes, and vertigo. He had diarrhœa, and began to vomit, which continued three days, when he again entered the hospital, July 30th. At this time he seemed rather dull, and complained of headache. The pulse was 44 and the temperature 99·6° F., and the patient lay quietly in bed until August 8th, complaining of headache and being stupid. The left arm and leg were slightly weaker than the right, and the reflexes were diminished upon that side. The ophthalmoscope revealed neuritis descendens. The left pupil reacted more slowly than the right. There was no facial paralysis, or paralysis of the tongue or uvula. The pulse varied from 44 to 56. On the 8th the patient became more stupid and irritable, and had a slight convulsion. Four days later he became brighter, and recognized those about him. The slight loss of power on the left side had gradually disappeared. Until September 3d the pulse varied from 56 to 80. On that day it rose to 87, and the next day the patient seemed to be failing. For three weeks he lay in a semi-stupor, delirious at night, but there was no paresis. On September 8th there was a chill, with a temperature of 104·6°, a pulse of 144, and symptoms of cystitis. Opisthotonos was observed, the patient became restless, the pupils were slightly dilated, the conjunctiva was moderately sensitive, râles were heard over both lungs, and there was a systolic basic murmur. The patient remained stupid four days, when he again brightened, and was able to eat alone in bed. On the 15th his pulse, which had become depressed, again rose to 102, and the temperature rose to 102°. He again became stupid, but rallied again on the 18th. He died suddenly on the 19th. The calvaria was thin; the pia mater was dull, with considerable serum beneath it at the base; the convolutions appeared flat. In the left frontal lobe, above the gyrus fornicatus, there was an ovoid mass covered with white brain substance, projecting to the right of the median line. The mass was an inch and a half by two inches in diameter, egg-shaped, and consisting of a clot, partly recent, but principally of some duration and quite firm. The surrounding brain substance, extending to the roof of the left lateral ventricle, but not involving the cortex, was undergoing yellow degeneration. The lateral ventricles contained only a slightly increased amount of serum. The heart was normal. The bladder showed acute inflammation. Both kidneys were swollen and congested. The aorta was narrow and its wall thin. The speaker called attention to the fact that several cases were now on record in which young men who had died of cerebral apoplexy had been found, post mortem, to have an abnormally small aorta. He referred to a case of the kind presented to the society by Dr. Peabody.

Dr. Ferguson had seen four specimens from young men who had died of cerebral apoplexy and in whom the aorta was found to be unusually small.

NEW YORK ACADEMY OF MEDICINE.

Meeting of October 7, 1886.

The President, Dr. A. Jacobi, in the Chair.

(Concluded from page 442.)

Some Phases of Cerebral Syphilis.—The conclusion of Dr. Althaus's paper was as follows:

The diagnosis of syphilitic from other forms of coma is sometimes easy and sometimes extremely difficult. The history and attendant circumstances of the case must guide us in the recognition of such conditions as coma from exposure to extremes of temperature, from injury to the head and meningitis, from erysipelas of the face, etc. The coma which accompanies apoplexy from cerebral hæmorrhage occurs habitually in men past fifty years of age, while syphilitic coma occurs either in young men or in those in the prime of life. Moreover, there are in the former habitually the well-known symptoms of hemiplegia, which are absent in syphilitic coma. The cases most likely to be confounded with the latter are those where hæmorrhage takes place into the pons, causing great contraction of the pupils, retraction of the eyeballs into the orbit, and paralysis of all four extremities. In such cases the question likewise arises whether we may not have to do with opium poisoning. In endeavoring to decide these questions we must remember that in syphilitic coma the pupil is not extremely contracted, while in opium poisoning and hæmorrhage into the pons it is so to the utmost possible limit. Where laudanum has been taken, this may be smelled in the breath, and, if the unconscious patient is seen to scratch himself vigorously, we should conclude for opium, itching being a frequent symptom of poisoning with it. Finally, in opium poisoning there is retention of the urine, with a full and often greatly distended bladder, which sometimes reaches up into the epigastrium, while in syphilitic coma the bladder is empty, and the urine found to dribble away as it is secreted.

The coma which follows an epileptic fit and severe hysterical hystero-epileptic convolutions is habitually of much shorter duration than syphilitic coma. Moreover, the epileptic fit, even where it has not been witnessed, leaves evidence in a bitten tongue, foam at the mouth, and petechiæ of the face. The history of the case may also be of use. A young woman in a comatose condition was admitted a few months ago into the hospital under my care, and the mother stated that the girl had had fits, and had for some time past been unable to feel anything in her left side. Here we had, therefore, to do with hemianæsthesia in a young woman, and fits which led me as such to suspect hystero-epilepsy; and this was confirmed by the further progress of the case. In this instance the coma lasted for thirty-six hours.

Alcoholic coma occurs frequently in the London docks, where the men who are employed there are apt to develop a craving for sucking raw spirit from a barrel through a straw until they fall down dead drunk; and, if they are discovered near the barrel in this state, the diagnosis is indeed ready made. But, under other circumstances, difficulties may arise. The smell of alcohol in the breath is of very little diagnostic use, as a man beginning to suffer from the first effects of cerebral hæmorrhage is apt to take brandy for reviving himself, or is given it by sympathetic bystanders. More trustworthy information may be obtained from the urine. When small doses of alcohol are taken, this is partly eliminated by the breath and partly undergoes combustion in the blood and tissues, and can, therefore, not be discovered in the urine; but large doses, such as are sufficient to produce coma, are eliminated unchanged by the urine; so that, if the latter is found to have an alcoholic smell, this is enough to establish the diagnosis. The temperature is generally lowered in alcoholic coma, but rarely more than one or two degrees, so that, for instance, a temperature of 95° would speak against it. Another important sign is that the pupil is enlarged in alcoholic coma, while in syphilitic coma it is small.

The diagnosis of *uræmic coma* will be easy where the history of the case is known; but, where it is not, difficulties may be experienced. This kind of coma may occur quite suddenly, without any premonitory signs, for the patient may fall down unconscious while writing at his desk, or driving in a carriage. In general, however, it is preceded by headache and vomiting, and occasionally by defects of sight and hearing; after this, epileptoid convulsions set in, and leave the patient comatose. The breathing is then stertorous, and the pupils are dilated. The patient may then recover for a time, but is again seized with a fit, and becomes once more comatose. It is therefore seen that in uræmia we have to do with fits and remissions, and that there is not a dead level of unconsciousness, as in syphilitic coma. Anasarca is frequently present; there is generally no incontinence, but retention of the urine, which is scanty, and, if a specimen is obtained, it is found to contain albumin and tube-casts. Finally, the presence of urea can be shown in the blood by raising a blister, evaporating the serum which is effused, treating the residue with alcohol, and then adding a few drops of nitric acid, when crystals of nitrate of urea will be formed.

Finally, how are we to distinguish syphilitic from *diabetic coma*, or, as it is sometimes called, Kussmaul's coma, or acetonæmia? About one half of the patients who succumb to diabetes die comatose; and, as the coma sometimes sets in quite suddenly, and apparently without any warning, Prout, and Frerichs after him, were quite justified in saying that the diabetic lived habitually on the brink of a precipice. There are three different kinds of diabetic coma. The most common is that with which Kussmaul's name is connected, and which occurs chiefly in young persons and where the course of the disease is rapid. This is sometimes ushered in by epigastric pain, vomiting, diarrhœa, or obstinate constipation. The patient is then seized with a peculiar form of dyspnœa: he lies gasping for breath, respiration being very much accelerated, while the respiratory movements are free and the air-passages pervious. The breath has a peculiar odor, like cider, apples, or chloroform, which is owing to the presence of acetone in the expired air. The urine is abundant and contains sugar; in almost all cases it likewise shows a peculiar reaction with perchloride of iron, which imparts to it a deep reddish or Burgundy color, which disappears on heating or acidulation. This reaction is generally owing to the presence of aceto-acetic acid in the urine. This acid, however, is a very unstable compound, and easily splits up into acetone and carbonic acid, so that acetone is also habitually found in the urine. It appears probable that besides these two substances there are other poisons present in it, more particularly diacetic ether, trimethylamine, and beta-oxybutyric acid, which are formed in the blood in consequence of the abnormal tissue-changes, and poison the nervous centers unless they can be quickly eliminated. In consequence of this, the patient becomes drowsy, and there may be at the same time a restless delirium. There are sometimes remissions, but eventually the coma deepens. The pulse is quick, the temperature normal, subnormal, or very low indeed, down to 90° in the rectum. The pupils are sluggish, the surface of the body is cold, and death is sometimes preceded by convulsions. The peculiar form of dyspnœa and the presence of acetone and its allies in the breath and urine are sufficient to guide us in our diagnosis of these cases.

There are, however, two other forms of diabetic coma, the knowledge of which we owe chiefly to Frerichs and Dreschfeld. The first of these is what may be properly called diabetic collapse. It occurs more commonly in elderly persons, especially when they are stout and subject to gout and nephritis, and after they have been diabetic for some considerable time. There are the usual symptoms of collapse, which soon passes into coma and death; and the condition is probably owing to fatty degeneration of the heart and sudden failure of its action, especially after over-exertion or excess.

The last form of diabetic coma, and one which is only rarely met with, is where there is a first stage of excitement resembling that of alcoholic intoxication, which is, after a time, succeeded by coma and death. In these cases acetone has also been discovered in the urine, and in one of them large quantities of alcohol were found in it, although it was ascertained with certainty that the patient had not taken alcohol in any form or shape. These latter two kinds of diabetic coma can not, therefore, possibly, on account of the great dissimilarity of symptoms, be confounded with syphilitic coma.

The *prognosis* of syphilitic coma is always grave. Although it is not by any means so hopeless as that of uræmic and diabetic coma, which latter almost invariably prove fatal, yet there is proof that that terribly subtle and rancorous poison of syphilis has insinuated itself into the cerebral arteries; and, even if neutralized by treatment for a considerable time, it will probably sooner or later return to the attack, and eventually overcome all resistance. The prognosis of the individual attack is, however, on the whole not very unfavorable, more especially if specific treatment is resorted to in the beginning. My two patients in whom the first attack proved fatal had been treated simply with stimulants until symptoms of paralysis of the pons and bulb had supervened, so that their cases were practically hopeless at the time the specific treatment was commenced. What is likely to occur after the patient has recovered from the attack depends to a great extent upon the degree of perseverance with which he may allow a specific treatment to be carried out. Some patients are averse to swallowing medicine unless they are at death's door, and give up treatment as soon as they feel tolerably comfortable. For these the prognosis is of the worst description; for they are certain either to succumb to a similar attack sooner or later, or to end their days in the mad-house as general paralytics. Where, on the contrary, a patient will submit to two years' consecutive treatment for the distemper under which he is laboring, he appears to have a fair chance of escaping further trouble from this source.

The *treatment* of syphilitic comas hould be partly symptomatic and partly specific. Systematic feeding with easily digestible substances, more especially milk, chicken-broth, beef-tea, and small doses of alcohol, is of the greatest importance. The food may be peptonized if considered advisable. If the patient should appear in imminent danger of death, hypodermic injections of ether sometimes turn the balance in his favor. I once injected forty minims at a time, with the result that the patient rallied almost immediately. The average dose is twenty minims, three or four times a day. Ammonia has appeared to me of little use in this condition. Blistering the back of the neck or the forehead, however, seems sometimes to be beneficial. Ice and other cold applications to the head are unnecessary where the temperature is normal, and hurtful where it is diminished; while in the later stages of the complaint, where the temperature runs up very high, I have found them quite useless. The cold douche, which is often so beneficial in the coma of meningitis, has appeared to me to do more harm than good in some of the cases now under consideration, while in others it scarcely seemed to warrant the trouble which was required for administering it.

The principal part of the treatment is the specific one by mercury, which should, for obvious reasons, be administered either by inunction or by hypodermic injection. For inunction we may use the old-fashioned blue ointment, which is probably, after all, the most effective of all external applications, as mercury appears in the urine after a single inunction of one drachm, which contains twenty grains of metallic mercury; or the oleate may be used, containing ten, fifteen, or twenty grains of the yellow oxide, for an application. Three inunctions of this are, however, required for showing mercury in the urine. The yellow oxide may also be rubbed up with lanolin, and it seems to be rapidly absorbed in this combination. For hypodermic injections I consider the perchloride the most effective preparation, and this should be injected deep into the substance of the glutæi muscles, in order to avoid irritation and the formation of abscesses, which is so apt to occur when this medicine is injected into the subcutaneous areolar tissue. We may, however, also use the albuminate, the peptonate, the cyanate, or the formamidate of mercury, in doses of one sixth to one third of a grain, once a day.

Time warns me that I shall soon have to bring my remarks to a close, and I will therefore at once proceed to the second portion of my discourse, which will treat of some of the clinical peculiarities of *syphilitic hemiplegia* as compared with ordinary hemiplegia. The symptoms of the ordinary attack of hemiplegia, owing to hæmorrhage into the central ganglia, or embolism of the Sylvian artery, are rarely reproduced in the attack which is owing to syphilitic infection. While in the former we meet with the well-known symptoms of apoplexy, to which more or less complete motor paralysis of one side of the body is added, we find in the latter a number of different types, which all show great variations from one another as well as from the non-specific attack of hemiplegia. There are, however, some features which all these several types have in common, viz.: 1. The immense majority of the patients are males—according to my experience, 95 per cent.—while both sexes suffer about equally from ordinary hemiplegia. 2. The patients are young or comparatively young subjects—viz., between eighteen and forty years of age:

> "For in the morn and liquid dew of youth
> Contagious blastments are most imminent."

3. They show a peculiar behavior of the deep reflexes, or tendon phenomena, which has not been previously described, and to which I shall have presently to refer in a more pointed manner.

One of the several types of syphilitic hemiplegia is shown by the case of a clerk, aged twenty-eight, who was under my care at the hospital in November, 1884.

This young man told me that he came from a healthy stock, but had for years before committed excesses in drinking, smoking, and sexual indulgence; that he had had gonorrhœa half a dozen times, and a hard chancre followed by specific eruptions four years before. After that he continued apparently quite well for three years, but unquestionably that terrible bacillus was breeding in his lymphatic system all the time, for he found one day that his left eyelid drooped, and that he had a difficulty in seeing with the left eye. At that time he happened to be in Australia, and six months afterward took his passage home. He had been on board ship for a fortnight and never thought that there was anything the matter with him, when one day, while sitting quietly on deck, he experienced a feeling of faintness and giddiness; there was no loss of consciousness or speech, no headache or sickness, no incontinence of the excreta, but he had a strange feeling of loss of power gradually stealing over his right side, and in half an hour found that he could not use his hand, and walked lame. The paralysis was incomplete, for he was always able to move the arm and hand in different directions, although slowly and sluggishly, and had not been obliged to take to his bed for a single day.

Such an evolution of symptoms points very plainly to brain disease of syphilitic origin; indeed, the diagnosis might in this case almost have been made without inquiry about a previous specific sore or secondary symptoms. This man had had a stroke of paralysis of the right side at twenty-eight years of age, without any other systemic affection which could account for it; and we may take it for granted that, if hemiplegia occurs in a patient between twenty and forty years of age who has no heart disease, diabetes, tabes, kidney disease, alcoholism, or the like, and in whom there has been no preceding acute illness, such as pneumonia, typhoid fever, etc., there is the strongest presumption that the affection is venereal. Another characteristic sign was that there had been no apoplexy at the time the stroke took place; for, while the ordinary attack of hemiplegia from softening or hæmorrhage is habitually accompanied by loss of consciousness and incontinence of the excreta, the syphilitic patient, when struck by hemiplegia, often assists, fully conscious, at the invasion of the paralysis. Then, again, the palsy had been incomplete from the beginning, and had remained so throughout its further progress. This incomplete character of the paralysis is another peculiar feature of syphilitic hemiplegia; for, while in the idiopathic form there is complete loss of motor power, at least for the first few days or weeks of the illness, this is somewhat exceptional in the syphilitic variety, which is more frequently paresis than paralysis.

I have stated that the first nerve-symptom which occurred in this patient was drooping of the left eyelid, with difficulty of seeing with the left eye. On examining the eye, I found that there was external as well as internal ophthalmoplegia, owing to paralysis of the third, fourth, and sixth nerves. This paralysis was complete in the superior and inferior recti and the inferior oblique muscles, and incomplete in the levator palpebræ superioris, the internal and external recti, and the superior oblique. There was also paralysis of accommodation, and of the sphincter and dilator of the iris. The pupil was large, of ovoid shape, insensitive to light, and only slightly influenced by eserine and atropine. Dr. Laidlaw Purves reported the ophthalmoscopic appearances of the fundus of the eye to be normal, the tension likewise normal, no bulging or tenderness to pressure, vision $\frac{15}{200}$, color vision fair. The right eye and eyelid were quite normal, and there was no sign of disease in the other cranial nerves. The complication of hemiplegia of one side with ophthalmoplegia on the other side is, again, most significant of syphilis. In the ordinary form of hemiplegia the only cranial nerves which are affected are the portio dura and the hypoglossus of the same side. In syphilitic hemiplegia, on the contrary, we frequently meet with palsies of the nerves of the eyes, more especially the third, but also the fourth and sixth. Such palsies indeed were long ago called by Ricord the signature of syphilis on the eye of the patient. Ptosis alone is very common; and still more common is ptosis combined with paralysis of the rectus superior, or the rectus internus. Besides these, there are all possible varieties and combinations of ocular palsies, occurring in about three out of every four patients suffering from cerebral syphilis.

A *second type* of syphilitic hemiplegia is that in which the paralysis is preceded by headache of a peculiar character; and of this the following is a good instance:

An architect, aged thirty-seven, single, consulted me in December, 1881. He had not inherited any neurotic tendency, and had been in excellent health—saving an attack of small-pox when quite young—until 1873, when, after impure connection, he was troubled with a chancre, which was soon followed by roseola, sore throat, and ulceration of the tongue. These symptoms continued for about twelve months, but eventually yielded to mercury and Zittmann's decoction. The patient now remained apparently in good health for six years, when he was seized with headache of extreme violence, which occupied the very center of the head and came on periodically three or four times in the course of the twenty-four hours. It lasted for about an hour each time, and was so severe as to drive him nearly frantic. It was not like neuralgia, rheumatism, or megrim, but deeper-seated and inside the head, as if blows from a heavy hammer went right through the substance of the brain. The patient was, singularly enough, all the time treated with quinine, which did no good, and the pain continued with the same maddening violence for six months, when he one day fell down in a fit, speechless, but not unconscious, paralyzed on the right side, but retaining full control over the excreta. From that day he never had had any more headache. In ten days he recovered his speech, but the paralysis of the side remained. After a time he was seized with such severe pain in the spine that as many as five hypodermic injections of morphine per diem were required to ease him; and shortly afterward he lost the power over the left leg, the bladder, and the bowels. The bladder was at the same time so irritable that the patient had to introduce the catheter, which he did with the left hand, every hour by day and night. His speech and all the intellectual faculties were normal, there was no ocular paralysis, but there were paralysis and rigidity of the right arm and both legs, paralysis of the bladder, and great sluggishness of the bowels.

No similar evolution of symptoms ever takes place in cases of idiopathic disease.

A *third type* of syphilitic hemiplegia is that in which both sides of the body are affected in succession, the attacks following one another within either a few days, or weeks, or months.

A case of this kind was that of an officer, aged forty, single, who came under my care in April, 1880. He had enlisted in the British army when seventeen years of age, and served chiefly in India. His health had on the whole been good, but in 1875 he had gonorrhœa and syphilis, and was treated with mercurial inunction. Rather more than three years after this he was ordered to take part in the campaign in Afghanistan, and suffered a good deal from exposure to the extreme cold prevalent at that time. Presently he began to suffer from headache, giddiness, and general malaise, which continued for about a week. One night, being too restless to sleep, and feeling very unwell, he got out of his tent and began to walk about in camp, but found that he had great difficulty in moving. He therefore went back to his tent, and after a while fell asleep. On waking in the morning he was surprised to find himself paralyzed—the left side—and that the excreta had passed under him. He could not put out his tongue, had great difficulty in speaking and swallowing, and his pupils were very large. Five days afterward he felt that he was losing power in the right side of the body, and this became worse day by day, so that at the end of ten days he was completely paralyzed and had lost his speech. During the whole of this time he had never once lost his consciousness, but had constantly suffered from faintness, giddiness, and headache. He was now put on the use of iodide of potassium, and within a month from the commencement of the illness began to improve. The speech returned, although there was still difficulty of articulation; he recovered a degree of motor power, more especially in the right side; was invalided and sent home, and bore the journey pretty well. I have seen him quite lately; he remains in much the same condition, is totally disabled as far as loco motion is concerned, but his intellectual faculties have remained quite clear.

In other patients months may intervene between the successive attacks of hemiplegia.

Such was the case of a woman aged thirty-four, whom I saw at the hospital in December, 1883. She had been quite well up to the time of her marriage, five years ago. Her husband was a soldier, had served in the British army in almost every quarter of the globe, and notoriously led a very wild life. A month or two after her marriage the wife was seized with ulcerated throat and an obstinate skin eruption. Three years afterward she suddenly found that her left eyelid drooped; and there were now ptosis and paralysis of the rectus internus. Six months after that she had a stroke of right hemiplegia with aphasia, and, four months after this, left hemiplegia. She made a good recovery as far as the aphasia and the paralysis of both sides were concerned, but the ptosis and palsy of the rectus internus remained unaltered.

The *last type* of syphilitic hemiplegia to which I will draw your attention to-night is that in which the paralysis comes on not more or less suddenly, but quite slowly.

In February, 1885, I was consulted in the case of a young man, aged twenty-three, who, after infection only eight months before, was taken with insidious symptoms of gradually increasing hemiplegia of the left side. As he was in a highly nervous condition, and so depressed in spirits that he would often burst out crying, apparently for no earthly reason, his affection had been diagnosticated as hysterical, and he had been treated with iron and phosphorus and shower-baths. The loss of power had appeared at first in the left leg, the patient being unable to lift his foot well from the ground, and scraping it when walking. After a time the fingers of the left hand had likewise become affected; the patient was very clumsy in dressing and eating, and had to give up playing on the piano. Paralysis of the lower branches of the portio dura eventually came on, causing deformity of the face when laughing, and difficulty in whistling. Headache and drowsiness then supervened, and the intellect became clouded. This case was peculiar for the unusually early appearance of so-called tertiary symptoms—viz., eight months after the primary sore; and this had at first no doubt prevented a due appreciation of the cause of the illness. Treatment by inunction was now resorted to, and showed the disease to have been truly specific, for there was manifest improvement in a few days, and the patient eventually made a very fair recovery.

You will readily admit that the several types of syphilitic hemiplegia which I have just sketched differ *toto cœlo* from the ordinary form of hemiplegia which occurs in the aged from hæmorrhage or softening, while they differ no less considerably from one another. Indeed, while cases of ordinary hemiplegia, taken quite promiscuously, are very much alike, there is hardly a single case of syphilitic hemiplegia which exactly resembles another; and it is this extraordinary variety in their clinical aspect which constitutes one of their most characteristic features. But is this peculiar grouping of symptoms sufficient to render the diagnosis of specific brain disease certain? Such is not the opinion of Fournier, who states that there is not a single pathognomonic symptom whereby we can distinguish idiopathic from syphilitic hemiplegia, and that we must rely for our diagnosis not only upon the peculiar development of the nerve symptoms, but also on the presence of venereal affections in other organs—such as the skin, the testicles, or the bones; on the fact that syphilitic hemiplegia occurs not so much in the aged as in persons in the prime of life; and that we can arrive at certainty only by the results of specific treatment, as the latter may cure the syphilitic variety, while mercury and iodide of potassium are ineffectual in ordinary hemiplegia. I am bound to say that I consider this latter test—viz., by the results of treatment—a very fallible one, as specific treatment fails to cure a very considerable number of cases of hemiplegia where there can be no doubt whatever about the specific nature of the complaint. I have, however, for some time past been of opinion that there exists one truly pathognomonic symptom whereby we are able to distinguish at a glance the syphilitic from the ordinary form of hemiplegia, and this symptom is an excessive exaggeration of the deep reflexes or tendon phenomena, which is present in syphilitic cases and wanting in idiopathic cases. In 1882 I showed a syphilitic patient at the Clinical Society of London in whom this symptom was so characteristic that it attracted my special attention. In that case the tendon phenomena were so much increased in the paralyzed leg that it shook fearfully on the least provocation—such as a sudden noise, opening the door, introducing the catheter, sneezing, coughing, etc. Percussion of the patellar ligament, of the tibia, and, in fact, of almost any point of the limb, induced violent so-called spinal epilepsy, which lasted for a considerable time, and was very greatly in excess of what is seen in ordinary hemiplegia. Another patient, when his patellar tendon was only touched, stamped the ground so violently as (according to his own saying) almost to "bring the house down"; and it is an interesting fact that this excessive exaggeration of tendon reflexes is not at all in proportion to the degree of the paralysis or muscular rigidity which may be present. Indeed, I have seen it in cases of syphilitic hemiplegia as well as of monoplegia, where the loss of power, although quite definite, was yet comparatively very slight; and it is a symptom on which I now chiefly rely in my diagnosis of these cases. Of course, it can only be utilized where the reflexes on the healthy side are normal, for there are patients, more especially of the neurasthenic type and also those suffering from the various forms of spastic paralysis, in whom these reflexes are everywhere greatly exaggerated, and in whom, therefore, such an appearance would not have the same significance. The exaggerated response occurs in the upper as well as in the lower extremity with equal force and readiness; but the symptom is habitually not quite so marked in cases where the paralysis has come on gradually as where there has been a sudden stroke.

I regret I have no time left to speak of the influence of treatment in this and similar conditions. It is, however, a singular fact that, while the therapeutical results in syphilitic nervous affections are sometimes exceedingly gratifying, they should in other instances be just the reverse. There is a general impression in the profession that the prognosis in specific lesions is altogether better than in ordinary idiopathic disease; but this is only partially true, for many patients suffering from cerebral affections on a syphilitic base, even if energetically treated on a specific plan, do not recover, and either remain stationary or undergo a rapid process of further deterioration, ending habitually in general paralysis of the insane. This apparently incongruous fact is, however, well accounted for by the circumstance that we have in brain-syphilis to do not only with specific lesions, but also with the secondary consequences of such; and that these latter can not, in the nature of things, be expected to yield to anti-syphilitic treatment. No doubt a gumma in the subarachnoid space may be absorbed and thickening of the dura mater reduced; but, where a gumma has already caused wasting of cranial nerves by strangling their substance, or where the occlusion of an important cerebral artery has led to softening of a certain area of cerebral tissue, such secondary and non-specific lesions can not be cured, for no amount of mercury and iodide of potassium, or, in fact, any other drug, can restore nerve-cells and fibers which have once perished. It is, therefore, only possible to cure those patients in whom the primary (specific) lesions have not as yet conduced to secondary (ordinary) lesions. The lesson which we have to learn from this should, therefore, be to subject patients, as soon as they show the slightest definite symptoms of specific brain disease, at once to an energetic anti-syphilitic treatment, so as to disperse the primary and truly syphilitic lesions, and to prevent, as far as possible, the formation of secondary (ordinary) lesions, against which latter our remedies are known to be powerless. What occurs in syphilis of the brain thus affords a striking illustration of the truth of the old Hippocratic maxim, ὁ δὲ *καιρὸς οξὺς*—the opportunity is fleeting. Let us, therefore, always endeavor to make use of it before it is too late.

Dr. R. W. Amidon called attention to weakness of the heart as a factor in the causation of syphilitic coma. A weak heart existing in a person with arterial disease would be very apt to bring on the comatose condition referred to in the paper. The existence of an occluding disease of the arteries in these cases was well known, but that of itself would hardly account for the very sudden onset of the coma.

Dr. A. D. **Rockwell** recited a case of hemiplegia with facial paralysis and hesitancy of speech, due, as he thought, to syphilitic brain lesion. The patient improved under anti-syphilitic treatment.

Dr. R. W. **Taylor**, speaking of the history of cerebral syphilis, expressed the opinion that the author of the paper had not given sufficient credit to writers previous to the nineteenth century. An admirable digest of the history of syphilitic inflammation of the cerebral arteries would be found in "Guy's Hospital Reports" for 1879–'80. The author's description of syphilitic coma was admirable; Dr. Taylor had nothing to add to it; his divisions of hemiplegia were clear and readily understood; but he thought we had had the same told us in this country years ago (as early as 1871–'72) as the result of the observations of Dr. Van Buren and Dr. Keyes, as could be seen in a valuable paper by Dr. Keyes on this subject, in which he spoke of the early date at which syphilitic hemiplegia came on, its gradual development without loss of consciousness, etc. Dr. Taylor thought there were also other factors in the production of the brain disease described by the author—the coma, the syphilitic dementia, and the general paresis of the insane—such aggravating causes as sexual excess, unnatural sexual habits, and alcoholism. These three factors went together in the causation of diseases called syphilitic nervous affections.

Dr. L. C. **Gray** thought the question as to the exact condition of the brain in syphilitic coma was one on which we yet needed a good deal of light. With regard to the condition of the brain in syphilitic affections, we were generally warranted in attributing it to some preceding arterial trouble, yet in many cases, especially in those in which there was a tendency to coma, the textural changes which took place in the brain were out of all proportion to those found in the arteries. He had last spring made autopsies in two cases, neither of which was exactly a typical case of syphilitic coma as described by Dr. Althaus, but in both cases the coma was the main symptom, while the paralytic symptoms appeared later and were entirely secondary. In both he found disease of the cerebral arteries, in one the disease being manifest to the unaided eye as well as under the microscope. But in neither case was the arterial change sufficient to account for the disturbance in the brain. In one the textural change was greatly out of proportion to the arterial change; there was very considerable softening, rendering the brain almost pultaceous. In one, besides considerable softening, there were a few patches of meningitis seen in the pia mater; in the other there were not only here and there a few patches of leptomeningitis, but syphilitic gummata, forming neoplasms. He therefore thought that the mere theory of some occlusion of the basilar artery was not sufficient to explain the supervention of coma. While a thrombus, an embolus, or gradual proliferation in the vessel might produce coma, the existence of these conditions in the basilar artery seemed to be unnecessary to account for syphilitic coma. Among the many interesting points in the paper which had attracted his attention was one relating to therapeutics. He had been quite astonished to hear Dr. Althaus speak so favorably of the use of mercury, while he had not dwelt to any great extent upon the use of the iodide of potassium, and in this regard he believed the author's views were at variance with those entertained generally by the profession in this country. He had had some experience in the treatment of nervous syphilis, and must say that he had failed to observe benefit from any mercurial preparation in the treatment of brain syphilis, whether the disease came on early or late; but he had found indubitable evidence of the value of the iodide over mercury.

Dr. L. **Putzell** agreed entirely with the reader of the paper regarding therapeutics. He had found that after giving iodide of potassium, even in large doses, the symptoms did not yield, or yielded very slowly, until mercury was used. Regarding the probable pathology in syphilitic coma, it seemed to him that, if the symptoms were purely the result of a thrombus in the basilar artery, there would be more distinct pons and bulbar symptoms. A number of the vessels at the base of the brain being affected, not to the extent of producing occlusion, but causing impaired nutrition, would, he thought, explain the symptoms up to the fatal event, this being, probably, the result of complete occlusion.

Book Notices.

Venereal Memoranda. A Manual for the Student and Practitioner. By P. A. **Morrow**, A. M., M. D., etc. New York: William Wood & Co., 1885. Pp. iv–332. [Wood's Pocket Manuals.]

Though this book is small, it is one which neither the student nor the practitioner can well afford to be without. In reading it we are impressed with the clearness of its style, and the care the author has taken to weigh every word. It is no mere compilation or digest of other works, but a statement of the author's views as to the nature and treatment of the diseases of which he writes; and when we take into consideration his wide experience in the care of venereal patients, we can but feel that what he says is worth listening to.

The first three parts of the book (236 pages) are written so that each sentence forms one paragraph, which greatly enhances its value for ready reference and for memorizing. The fourth part is a collection of well-tried formulæ, and will be found serviceable. When we say that all the venereal diseases and their complications are clearly and concisely treated of in the book, and that the author's views are conservative, we have said that the book is a model of its kind and a safe one for a guide.

How we treat Wounds To-day. A Treatise on the Subject of Antiseptic Surgery which can be understood by Beginners. By **Robert** T. **Morris**, M. D., Late House Surgeon to Bellevue Hospital, etc. New York and London: G. P. Putnam's Sons, 1886. Pp. vi, 1–162. [Price, $1.]

For the sake of the subject-matter of this book one can almost forgive its bad style and the evidences of bad taste which it contains. Those who wish to know how to treat wounds of almost all varieties according to the strict rules of antiseptic surgery can learn here. The book is therefore valuable for all who have not had an opportunity to acquire this knowledge by practical observation. It is written, however, in a style we have never before seen, being composed entirely, from the "first word" to the "last word," of separate paragraphs, each as short as possible. A paragraph of three words is occasionally forcible, but a book composed in great part of them is—peculiar. We have not space to deal fully with the marks of bad taste, but will simply say that comparing a surgeon to a hod-carrier because he does not practice Listerism is not argument; and that the sentence "Patients go from great distances to this surgeon to allow him to start botanical gardens on their insides," especially when by a little research the name of the surgeon could be found, is not in good taste.

Manual of Differential Medical Diagnosis. By Condict W. Cutler, M. S., M. D., etc. New York: G. P. Putnam's Sons, 1886. Pp. 161. [Price, $1.25.]

This manual has decided merit and will commend itself to every one engaged in the study of medicine. A brief yet excellent introduction is devoted to the course which should be followed in the examination of patients and a systematic method is delineated. The author has wisely selected only those diseases most liable to be confounded, and has not burdened his manual with unnecessary matter. The book thus gains in brevity—is more pointed and concentrated, and yet is sufficiently exhaustive and comprehensive. The arrangement of the work is simple and natural, and the method by which it is placed before the eye of the student is excellent.

The author displays rare skill and judgment in contrasting disease. His differentiation is clear but not too sharply drawn, and displays extensive labor and research as well as practical knowledge. This little volume will prove of great assistance to the under-graduate, and an invaluable aid to the graduate who intends to compete for a hospital appointment.

Voice Use and Stimulants. By Lennox Browne, F. R. C. S. Ed. London: Sampson Low, Marston, Searle, & Rivington, 1885. 16mo, pp. 150.

Those familiar with the pernicious devices commonly resorted to by professional singers and speakers to aid them in the performance of their vocal duties will welcome this essay as a much-needed warning. To his own wide experience the author has added the combined opinions of three hundred and eighty eminent professional vocalists, so that the views advanced must be conceded to rest upon good authority. Following him through an interesting series of arguments and statistics, we are not surprised to hear that "while the narrow path of total abstinence offers no hindrance to the voice-user, the broader and more agreeable one of temperance must be confined to strict limits if functional health is to be maintained; and that, in spite of solitary examples of excellence coupled with excess, transgression of these bounds of moderation will lead as certainly to deterioration of quality and of duration of functional ability as it does to the impairment and abbreviation of life itself." Also, with regard to the use of tobacco, "there is enough evidence to show that it can effect no good purpose in relation to the voice, and is capable of inflicting considerable injury thereupon."

GENERAL LITERARY NOTES.

Among recent foreign publications we note the following:

J. & A. Churchill, London.—W. R. Gowers, "A Manual of Diseases of the Nervous System." (12*s.* 6*d.*)

Cornish Brothers, Birmingham.—Sir J. Sawyer, "Contributions to Practical Medicine." (6*s.* 6*d.*)

Fannin & Co., Dublin.—"A History of the Royal College of Surgeons in Ireland." (21*s.*)

W. & A. K. Johnston, Edinburgh.—D. B. Hart and A. H. F. Barbour, "Manual of Gynæcology." 3d ed. (25*s.*)

Smith, Elder, & Co., London.—J. Finlayson, "Clinical Manual for the Study of Medical Cases." 2d ed. (12*s.* 6*d.*) —— W. S. Playfair, "A Treatise on the Science and Practice of Midwifery." 6th ed. (28*s.*)

J. B. Baillière et Fils, Paris.—A. Hardy, "Traité pratique et descriptif des maladies de la peau." (13*fr.*)

A. Delahaye & E. Lecrosnier, Paris.—Augagneur, "Tumeurs du mésentère." (3*fr.* 50.) —— L. Legris, "Du sulfate de spartéine comme médicament cardiaque et de l'influence des fleurs de genêt comme diurétique." (3*fr.*) —— Legrand du Saulle, J. Berryer et J. Pouchet, 'Traité de médecine légale." 2d ed. (27*fr.*) —— H. Thulié, "La femme; essai de sociologie physiologique." (7*fr.* 50.) —— Peugniez, "De l'hystérie chez les enfants." (4*fr.*) —— Sarda, "Des migraines." Thèse d'agrégation. (3*fr.* 50.) —— H. Saury, "Étude clinique sur la folie héréditaire." (4*fr.*)

Bureaux du "Progrès Médical," Paris.—Galezowski, "Des cataractes et de leurs opérations." (1*fr.* 50.)

Gustav Fischer, Jena.—C. Rieger, "Grundriss der medicinischen Electricitätslehre." (2*M.* 50.)

H. S. Hermann, Berlin.—J. Apella, "Zur medicinischen Statistik."

Moritz Perles, Vienna.—L. Wittelshöfer, "Medicinal-Kalender," 1887. (3*M.*) —— Billroth, "Aphorismen zum Lehren und Lernen der medicinischen Wissenschaften." (1*Fl.*)

Georg Thieme, Leipsic.—K. Roser, "Entzündung und Heilung." (1 *M.* 80.)

Toeplitz & Deuticke, Vienna.—A. R. von Mosetig-Moorhof, "Handbuch der chirurgischen Technik." 2d ed., 1st part. (8 *M.*)

F. C. W. Vogel, Leipsic.—C. Flügge, "Die Mikroorganismen." (18*M.*) —— M. Kassowitz, "Die Symptome der Rhachitis." 1st part. (2*M.* 40.) —— E. Lesser, "Lehrbuch der Haut- und Geschlechtskrankheiten." 2d part, 2d ed. (6*M.*) —— W. Moldenhauer, "Die Krankheiten der Nasenhöhlen," etc. (5*M.*)

Friedrich Wreden, Brunswick.—A. Seeligmüller, "Lehrbuch der Krankheiten des Nervensystems." Vol. ii. (6*M.*) —— H. Eichhorst, "Lehrbuch der physikalischen Untersuchungsmethoden innerer Krankheiten." Vol. ii. (19*M.*)

Armanni, Rome.—A. Celli, "La profilassi razionale del colera."

Giovanni Jovene, Naples.—G. Fabiani, "Manuale di medicature fasciature ed apparecchi." 2d ed. (10*l.*)

Direzione dello "Sperimentale," Florence.—G. Banti, "Manuale di tecnica batteriologica." (50*c.*) —— L. Vanni, "Le nozioni di semejotica." 1st part. (3*l.*)

Tipografia Cooperativa, Florence.—V. Grazzi, "Manuale d'otologia." (8*l.*)

Fratelli Tornese, Naples.—G. Sée, "La tisi bacillare dei polmoni." Transl. by Silvestri.

Torrini, Sienna.—V. Mibelli, "Ricerche sopra la sede dei microfiti nell'epidermide normale."

Voghera, Rome.—F. Rho, "Note di geografia medica raccolte durante il viaggio di circumnavigazione della R. corvetta 'Caracciolo.'"

Philippsen, Copenhagen.—Drachmann and Hertel, "Sundhetslære." (6*kr.*)

BOOKS AND PAMPHLETS RECEIVED.

The Human Color-sense considered as the Organic Response to Natural Stimuli. By L. Webster Fox, M. D., Philadelphia, and George M. Gould, A. B. [Reprinted from the "American Journal of Ophthalmology."]

The Mechanism of Indirect Fractures of the Skull. By Charles W. Dulles, M. D., Fellow of the College of Physicians and of the Academy of Surgery of Philadelphia, etc. [Reprinted from the "Transactions of the College of Physicians of Philadelphia."]

Hémorrhagies utérines, étiologie, diagnostic, traitement. Par le Docteur Sneguireff, professeur de gynécologie à l'Université impérial de Moscow. Edition française, rédigée par M. H. Varnier, Interne des hôpitaux de Paris. Sous la direction de M. le Docteur Pinard, professor agrégé de la Faculté de Paris, etc. Paris: G. Steinheil, 1886. Pp. xx–276.

Outlines of the Pathology and Treatment of Syphilis and Allied Venereal Diseases. By Hermann von Zeissl, M. D., Late Professor at the Imperial-Royal University of Vienna. Second Edition, revised by Maximilian von Zeissl, M. D., Privat-Docent for Diseases of the Skin and Syphilis, at the Imperial-Royal University of Vienna. Authorized Edition, Translated with Notes by H. Raphael, M. D., Attending Physician for Diseases of Genito-urinary Organs and Syphilis, Bellevue Hospital Out-patient Department, etc. New York: D. Appleton and Company, 1886. Pp. xii–402. [Price, $4.]

Practical Guide in Antiseptic Midwifery in Hospitals and Private Practice. By Henry J. Garrigues, A. M., M. D., Professor of Obstetrics in the New York Post-graduate Medical School and Hospital, etc. Detroit: George S. Davis, 1886. Pp. iv–128. [The Physician's Leisure Library.]

Reports on the Progress of Medicine.

OPHTHALMOLOGY.

By CHARLES STEDMAN BULL, A. M., M. D.

(*Concluded from page 476.*)

Cystoid Colobomata of the Eyeball.—Ewetsky ("Westnik Ophthalmologuii," March–April, 1886) gives the results of his microscopical examinations of these cystoid colobomata. The wall of the cyst is composed of two layers—internal and external. The internal is very thin and delicate, somewhat resembling the retinain structure. The external layer resembles the sclerotic in structure. In the wall of the cyst there are sometimes found inflammatory alterations, which are probably the cause of the small hæmorrhages found in the wall and cavity of these cysts. As regards the pathogenesis of these cysts, Ewetsky thinks that their cause must be sought in the inflammatory process, which produces a softening of the tissues, and thus renders them less resisting to distension.

Variations in the Form of the Lens in the Pathological State.—Bertrand ("Thèse de doctorat de Lyon," February, 1886) admits that the lens tends naturally to assume a spherical form more marked than is found in the normal state, and that the curvatures ordinarily described are the resultant of the action of the zonule. All the augmentations of curvature of the surfaces of the lens are due to relaxation of the zonule, or to the destruction of its tendons. All the flattening, on the other hand, is due to an exaggerated tension of these same tendons, except in cases where direct pressure is produced by some intra-ocular neoplasm. Owing to its natural tendency, the lens may mold itself into all the anfractuosities of the anterior chamber. The margin of the lens is the less prominent the less the action of the zonule is manifest, and it is rounded *ad maximum* when there is a complete rupture of the fibers of the zonule.

The Treatment of Certain Forms of Glaucoma without Operation.—Panas ("La France médicale," No. 69, 1886) sums up his observations in the following conclusions: 1. Myotics in the form of collyria, which have hitherto been considered as simple palliatives, may become veritable curative agents in certain forms of glaucoma. 2. They seem to be the most beneficial in cases which are not improved by operative procedures. 3. To obtain the most beneficial effect from myotics, their employment must be long-continued.

The Microbe of Conjunctival and Corneal Granulations.—Poncet ("Gaz. des hôp.," No. 43, 1886) has demonstrated the presence of the microbe of granulations in the epithelium of the cornea, and in all the other elements of the cornea invaded by the granulations. It is very small and very abundant, and fills the center of the cell. Poncet has found the cells filled with micrococci as far as the membrane of Descemet, and even in the iris.

A New Ophthalmoscopic Sign of Lesion of Nutrition of the Deep Structures of the Eye.—Giraud-Teulon ("Gaz. des hôp.," p. 528, 1886) finds that in many cases of doubtful diagnosis the venous blood, instead of presenting the usual brownish-red color, preserves the color of arterial blood, which is a proof that local nutrition is not perfectly carried out. He then considers to what conditions of activity of the vaso-motor nerves should be attributed the slowing or acceleration of the blood-current in there tinal vessels. He holds that the acceleration is due to diminution of resistance, to a relative inertia of the constrictor fibers, or to an opposite condition of the dilator fibers. He thinks that the slowing of the current should be attributed to a relative excess of these resistances—that is, to an inertia of the dilator fibers, or to a non-activity of the constrictor fibers.

Retraction of the Antagonistic Muscles in Ocular Paralyses, and its Surgical Treatment.—Gaudon ("Thèse de doctorat de Paris," 1886) advises, first, simple tenotomy when the retraction is accompanied by paresis, and when the deviation is three millimetres and less; second, above three millimetres, it is necessary not only to divide the retracted muscle, but to advance the paralyzed muscle. In complete paralysis after retraction of the antagonist, the operative interference should be confined to the affected eye, and, in order to obtain the maximum effect, after complete tenotomy of the retracted muscle, the paralyzed muscle must be advanced, with resection of a part of the tendon and a suture, including a large portion of conjunctiva.

On Insufficiency of the Power of Convergence.—Landolt ("Ophth. Review," July and August, 1886) considers the means of properly accomplishing the act of binocular vision when the power of convergence is insufficient. When it is necessary to ascertain whether a patient's power of converging is sufficient or not, the maximum of convergence should be taken as the starting-point of investigation. In order to determine whether asthenopia is due to insufficiency of this function, we must know how much convergence the individual requires for his work. Landolt divides muscular asthenopia into peripheral and central. The peripheral is dependent on the absolute or relative power of the adductor muscles and their insertions. The second variety arises from a disturbance of innervation of the muscles of convergence or in the power of fusion. These two varieties are characterized by the mode in which the range of convergence is affected, and this may occur in various ways. Landolt presents a diagram in which the range of convergence is represented by vertical lines, while a full horizontal line represents zero. Those parts of the vertical lines above the horizontal stand for the negative part of the convergence; those beneath for the positive portion. It may happen that the entire range of convergence is removed to the negative side. Such a condition may arise simply from excessive strength of the abductors, without either muscular insufficiency or disturbance of innervation of the internal recti, and tenotomy of one or, if necessary, both of the external recti muscles, gives good results in these cases. Favorable results may thus be obtained from tenotomy even in cases where a decided diminution in the range of convergence is present, provided it is not excessive, and that the positive part only is affected. But here advancement of the internal rectus also appears to answer very well. When the positive part of the convergence range is shortened, the negative being of normal extent, tenotomy may be advantageously done; but, if the latter is diminished to 0·5 of a metre-angle or less, advancement of the tendon is undoubtedly preferable. When both positive and negative parts of the amplitude of convergence are considerably shortened, we usually have to deal with the second or neuropathic form of insufficiency, which is characterized by a noticeable diminution of the range of convergence. Similar conditions are met with in high myopes, in whom, in consequence of enlargement of the eyeball, the muscles, being unduly stretched, lose their elasticity, and are also impeded in action, owing to the divergent position of the globes. In such patients the range of convergence may be reduced to less than 3 metre-angles, without the negative part of convergence having much increased. Any operation for cases like these gives most unsatisfactory results. Cases of the neurasthenic class, while exhibiting considerable lessening of the range of convergence, present no peculiar abnormality in either the form of the eyeball, the refraction, or the associated movements. The treatment of this class of cases is extremely difficult, for, where we often have to deal with a deficiency of convergence of 6 metre-angles and more, prisms are out of the question, while muscular advancement, the operation commonly chosen on account of the small extent of the negative accommodation, is attended with only temporary benefit. Most benefit is gained from ocular hygiene and attention to the general health, although even here neither operative aid nor prisms should be entirely excluded. Not only may absolute insufficiency of convergence or accommodation cause asthenopia, but the latter may arise in cases where, either function, taken by itself, being normal, there occurs incoordination in their combined action; for, with a normal *absolute* range of convergence and accommodation, the *relative* range of these functions may be affected. This may occur in young hypermetropes in whom insufficient relative range of accommodation leads to excess of convergence or squint. This is not insufficiency of convergence, but its opposite. On the other hand, it is possible, especially with myopes, that the correct convergence calls forth an excess of accommodation. From the point of view of the accommodation, such cases might be regarded as examples of insufficiency of convergence, or rather of the positive part of the relative range of convergence. Landolt declines to operate in these cases, and is inclined to regard and treat them as cases of spasm. The diagnosis of these cases is easily established by the use of Landolt's ophthalmodynamometer, which consists of a cylinder which can be fixed to any candle of ordinary size. It possesses a vertical slit of about 0·3 mm. in breadth, a vertical line consisting of a series of fine openings, and a circular aperture of about 1 mm. in diameter. The openings are all covered with ground glass, and, when the candle is lighted, they form shining objects, thrown into sharp contrast with the blackened exterior of the cylinder. Under each opening is placed a hook, to which can be attached the end of a measuring tape constructed to wind up by a spring in the ordinary way. This tape is divided into centimetres on one side, and on the other side into the corresponding value in metre-angles or dioptries, as the case may be. To ascertain the maximum of convergence, the tape being partly withdrawn, its case is held at the outer margin of the orbit, so that the aperture through which the tape issues is on a level with the point of rotation of the eyeball. The patient is then told to look at the vertical line upon the cylinder, and the instrument is gradually brought nearer in the median line, until he says the line appears double. The measure is then removed, and the distance of the punctum proximum read off on one side of the tape, and the maximum of convergence upon the other. This examination must be repeated several times in succession and upon different occasions, as the ocular muscles do not contract with mathematical precision. It is advisable to begin the approximation of the light from a distance considerably farther from the patient than his punctum proximum, and not to commence by placing the light close to the nose, because, while in the former case it is easy for him to increase his convergence gradually as the light approaches, in the latter he generally overcomes the beginning crossed diplopia only when his punctum proximum is considerably passed. The *minimum* of convergence, if positive, can also be estimated with the dynamometer, and will be found to be in inverse ratio to the greatest distance at which the bright line can be perceived as a single object. Should homonymous diplopia begin at only two metres distance, so that the negative convergence is less than a half metre-angle, the flame alone may be used, as the aperture forms too fine an object. To define the range of accommodation, the fine openings of the apparatus are used. These are gradually brought nearer the patient, till they appear indistinct and the result is read off on the tape in dioptries instead of metre-angles, and the maximum of refraction in the place of the maximum of convergence. When a person is emmetropic, the maximum of refraction of which he is capable is equal to the range of accommodation. The same line of bright points may be used in investigating the relations existing between the converging or motor and the accommodative or optical apparatus of the eyes. When convergence and accommodation harmonize, the patient will be able to see distinctly the row of luminous points as such. If convergence is at fault, the line will appear double, the diplopia being crossed if there is insufficiency, or homonymous if there is excess. Should there be any failure in the optical adaptation, especially error of accommodation, the points will appear blurred.

Cerebral Abscess subsequent to Orbital Periostitis.—Renton (*ibid.*) reports a case of this kind occurring in a boy aged twelve. When first seen the patient was suffering from what appeared to be orbital cellulitis of the right side of ten days' duration. A free incision was made along the inner side of the upper lid, a considerable quantity of pus evacuated, and a drainage-tube inserted. Four days later the discharge ceased, and the swelling had disappeared. Two days later he complained of severe pain in his head over the right temporal region. Vision was normal, and the ophthalmoscope showed a healthy fundus. The wound was reopened and a probe introduced, but no dead bone was discovered. The drainage-tube was reinserted, ice was applied to the head, and small doses of calomel were given. The pain continued, accompanied by vomiting, but, three days later, complete relief took place, and the patient remained well for three days, when the pain returned with great severity and lasted for five days. He was then attacked with convulsions of the left side, which rapidly became general, and he died in a few hours. The autopsy showed extensive necrosis of the orbital plate of the frontal bone, with meningitis overlying it, and an abscess in the anterior half of the frontal lobe, lined by a distinct membrane, and only separated from the dura mater by a thin layer of cerebral substance.

A Foreign Body driven through the Tissue of the Nose into the Orbit; Recovery.—Taylor ("Arch. of Ophthal.," xv, 3) reports a rare case occurring in a child aged twenty months. The child, three weeks previously, had fallen forward upon the floor, striking his head upon a pen-holder which was in his hand. The pen-holder ran upward in the left nostril and broke off. A physician removed three pieces, but the child's left eye had been in very bad condition since the accident, and was rapidly growing worse. The tissues round the left eye were swollen, hardened, and painful, the eye bulged forward, the lids were tightly closed and immovable, and pus escaped from between them. By holding the child's head firmly between the knees and using the elevator, the lids were separated slightly, and there then presented at the opening a black object, which was extracted, and proved to be a piece of the pen-holder, one and one sixteenth of an inch long, and one eighth of an inch in diameter. After removing the foreign body the swollen tissues were freely incised, and evaporating lotions used. Two days later, the swelling having partially subsided, the eye was found to be apparently uninjured, and two weeks later the patient was discharged cured.

The Correction of Certain Anomalies of Curvature of the Cornea by Glasses.—Purtscher (*ibid.*) has found that his own practical observations on traumatic astigmatism, its variety and correctability by convex cylinders with horizontal axis, and also its subsequent decrease, coincide with those made by Laqueur. He assumes that in such cases the radius of curvature differs in different parts of one and the same meridian. In cases of extraction of cataract, if the incision is made above, the lower or corneal border of the wound will protrude somewhat over the upper or scleral border, and consequently the uppermost portions of the vertical meridian will become considerably flattened, while the flattening will become less perceptible in the lower portions, which are farther removed from the line of incision. There is great room for improvement in the glasses now in use for these cases. This improvement could be effected if lenses were produced analogous to the cylindrical lenses such as are employed at the present time, but with the radius of curvature varying in different parts of one and the same meridian, so as to correspond to the peculiar optical defect of the cornea here referred to. On a longitudinal section such a lens would present an elongated rectangle, but a transverse section would differ from that of an ordinary cylindrical lens.

The Probable Cause of the Colored Rings seen in Glaucoma.—Dobrowolsky (*ibid.*) believes that colored rings may be seen by eyes which are free from cloudiness of the refracting media. In the cases of progressive myopia, the absence of opacities discernible with the ophthalmoscope and the perfect visual acuteness tend to disprove the assumption of slight cloudiness of the vitreous, which could be made on the basis of analogy. In his own eyes, the supra-normal acuteness of vision, persisting during the appearance of the colored rings, excludes every idea of haziness of the media. The results of his experiments by pressure exerted on the globe and by tension of the accommodation can not be satisfactorily explained by any sudden change in the refracting media. The only way to explain this phenomenon is to assume that it depends upon the irritation of the retina and the optic nerve by hyperæmia, and this he regards as the probable cause of the colored rings seen in glaucoma.

Myopia.—Stilling (*ibid.*) thinks that the question of myopia is still growing in importance. He has come to the conclusion that in statistical investigations on a large scale, where a great part of the determination is made and recorded only once, where by far the larger number of those examined are at once lost sight of, and where no homatropine or atropine has been used, there results a greater or less number of errors. It is almost certain that, among the great numbers of low degrees of myopia, there are many cases of hyperopia of low and sometimes even higher degree, which, when eliminated, would decrease the percentage. Statistical tables usually show a very small percentage of astigmatic eyes, but Stilling's own investigations show a strikingly high percentage of astigmatic eyes. He thinks that even the use of atropine gives no absolute guarantee, for the accommodation, though paralyzed for near vision, may be spasmodically strained for distant vision. Stilling has also doubts of the ability of examiners to completely relax their own accommodation. He believes that there are three different forms of myopia, thus in part agreeing with Tscherning, viz.: 1. Myopia of low degree up to 2 D. 2.

Myopia from 2 D to 6 D, mainly gained by adaptation. 3. Excessive myopia, beginning with 7 D. Most cases of myopia are of a low degree and harmless; only the smallest part is seriously progressive. The highest degrees must be regarded as a real disease, which can only be made dependent upon the influence of the schools, and especially high schools, inasmuch as it can only be injurious to a diseased eye to be strained. Stilling recapitulates his investigations by admitting that myopia is rather frequent, but not so frequent as the followers of Cohn have asserted. These assertions are based on the uncertainty of statistical determinations of refraction. Finally, he states that the actual working-myopia of 3–6 D only amounts to about five per cent.

Consequent paralytic squint will depend upon the issue of the struggle between binocular fixation and the position of rest. The spontaneous cure of squint also depends on the same issue. Since such spontaneous cures occur, as a rule, during the period of growth, they are obviously the result of a change in the position of rest brought about by changes in the size of the globe and its annexa.

New Inventions, etc.

A PRESSURE-GAUGE ELECTRODE.

By C. E. Moore, M. D.,

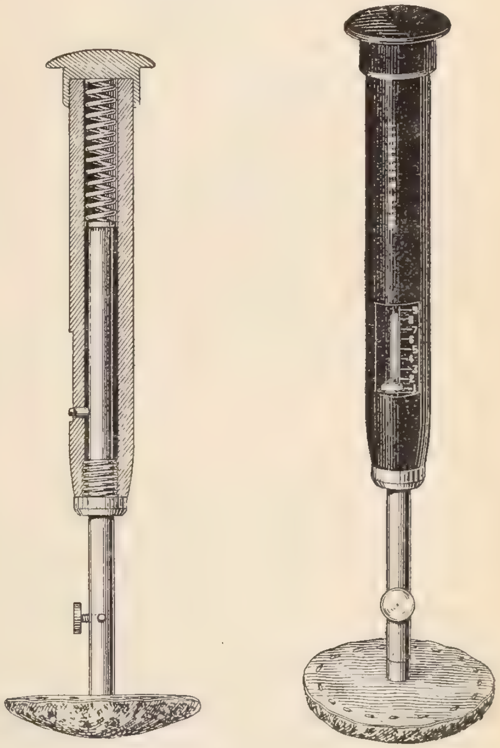
INSTRUCTOR AT THE NEW YORK POLYCLINIC.

The galvanic and faradaic currents are now in very general use for therapeutical ends as aids to diagnosis, and, by those engaged in giving instruction on the subject of electricity, for the purpose of experiment and demonstration.

When a current is made to flow through the body, its strength depends, to a very considerable degree, upon the amount of pressure applied to the electrodes and upon the degree of their saturation, and, in order that the results of an electrical investigation or application may be reliable or beneficial, it is necessary that these two factors be taken into consideration, and their possible influence upon the result be carefully guarded against. In administering the galvanic current, for example, by the method of central galvanization, it is important that the current, when applied to the head, should not get much beyond a certain strength, but the strength can be materially increased by such a slight change in the amount of pressure upon the electrode as might be made unconsciously or inadvertently by the operator. In using the current for diagnostic purposes, it is often necessary to regulate its strength with the greatest nicety, as, for instance, in comparing the reactions of muscles on opposite sides of the body; otherwise the results obtained are unreliable. In experimental demonstration, as in showing that the strength of the current varies as the electrode is shifted from one point to another upon the surface of the body, according to the thickness of the skin and the nature of the subjacent tissues, slight pressure changes will often yield anomalous results. So, also, in trying to establish the normal polar formulæ of reactions, it is possible to obtain an apparent reversal of the normal order of contractions, even though using the same number of cells at each trial, by simply varying the amount of pressure upon the electrodes or the degree of their saturation; hence, in order to secure a satisfactory and convincing result, the operator should have the means of determining, if not the actual, at least the relative strength of the current at each application.

When the galvanic current is used, the galvanometer furnishes an absolute measure of current strength, and also enables us to observe and provide for any changes in density which may arise from changes in pressure or degree of saturation, while, in those cases where it is necessary to know only the relative current strength at successive applications, the simple galvanoscope is an efficient instrument. Many practitioners, however, who have only occasional use for a battery, do not provide themselves with these instruments, either because they do not fully appreciate their importance, or from consideration of the expense; hence they are without means of estimating, even approximately, the relative strength of currents, or of guarding against serious increase in density produced by pressure changes. Again, in electrical investigations it is often necessary to make repeated applications to corresponding points on opposite sides of the body before a definite conclusion can be reached as to the existence of quantitative or qualitative changes in reaction, and the use of the galvanometer at each application causes tedious delay because in the ordinary instrument it takes considerable time for the needle to settle. In such cases, if we first assured ourselves by a preliminary trial with the galvanometer that the strength of the current did not vary on account of a difference in the conductivity of the skin, as it may do even when the electrode is placed upon exactly symmetrical points, at the succeeding trials we could dispense with the galvanometer and avoid the delay, provided we had means of gauging the pressure upon and saturation of the electrode; the same is true if successive applications are to be made to the same spot. Finally, with the faradaic current the ordinary galvanometer can not be used, and the operator has to depend largely upon the delicacy of the muscular sense to insure uniformity in the strength of the current, and this, from a scientific point of view, is not reliable.

From these considerations an electrode that will enable the operator to accurately gauge the amount of pressure and the degree of saturation seems to be a desideratum. The accompanying cut shows one that I have devised, which has been made for me by Messrs. Waite & Bartlett.



The rod of metal, to one end of which a sponge of any desired size may be attached, plays within the handle, impinging at its upper end against a spring. A metallic pointer is attached to the rod, which indicates upon an arbitrary scale, cut upon the handle, the degree of pressure applied. By taking care to saturate the sponge before each application, and then pressing it for a moment upon a flat surface until the pointer stands at the same mark of the graduated scale, a uniform degree of saturation is secured. It has two properties which the ordinary electrode has not:

1. It accurately gauges the amount of pressure.
2. It accurately gauges the degree of saturation.

Any advantage attending its use is attributable to these two facts. It is in no sense a substitute for the galvanometer, but it is believed that it will prove a useful accessory when used with it. Only in a limited number of cases, as when the faradaic current is employed or when successive applications have to be made to the same points on the surface of the body, can it be used to advantage independently of that instrument.

My excuse for inviting attention to so simple a device is the belief that electricity will prove useful in experiment, in diagnosis, and as a therapeutical agent, just in proportion to the exactness of the methods brought to its application.

264 West Forty-second Street.

Miscellany.

A Certain Cure for Corns.—A Berlin gentleman very much troubled with corns saw in a paper an advertisement of a certain cure for them, application, inclosing 1 mark 10 pf. in stamps, to be made under cover to A. X., Post Office, Geneva. The gentleman not unnaturally made application, and, in the course of a few days, received the following reply, which we have feebly striven to give in English:

Sind ihre Hühneraugen gross,
So dass von Schmerz Sie schwitzen,
So sägen Sie die Zehen los
An denen solche sitzen.

(Have you large corns upon your toes,
So that with pain you sweat, Sir?
Then take a saw and saw off those
On which your corns are set, Sir.)

"I recommend for this purpose my bone saws; price from 10 to 30 marks" (!!) (Air, "Yankee Doodle").—*Medical Press.*

Idiopathic Tetanus.—Dr. J. P. Getter, of Allensville, Pa., writes us that on the 4th of August he was called to see a lady, twenty-four years old, the mother of three children, the youngest two years old. Her general health had always been good. At the time mentioned she was suffering from menorrhagia. A drachm of fluid extract of ergot was given every hour until the hæmorrhage was checked, but she had previously lost so much blood that she was very weak. She recovered rapidly, and on the 12th she was able to sit up, and was feeling as well as usual, although rather weak. That day she sat in a draught, and in the evening she complained of slight pain and stiffness in the muscles of the neck and jaw, also of difficulty in swallowing. These symptoms grew worse, and the next day Dr. Getter was called to see her. He found her free from pain, except for slight soreness along the spine. The muscles of the jaw were rigidly contracted, and deglutition was very difficult. Her temperature was 101° F.; her pulse 110, and very weak. He ordered potassium bromide and chloral, in small doses, to be taken every hour, but, after two or three hours, she was utterly unable to swallow. A quarter of a grain of morphine was then given hypodermically, and this was repeated as occasion required. The rectum was emptied with an enema, and injections of milk, egg, and whisky were given every three or four hours for about thirty-six hours, when the bowel became irritable, and nothing was retained. During the night hot applications were made to the neck and jaw, but without any effect. An ice-bag was then freely applied. This proved more comfortable, and after an hour or two she was able to swallow a little; took milk in small quantities, tried the bromide and chloral again, and slept for an hour. Soon after she awoke, however, the muscles were so rigid that swallowing was impossible. On the 14th she was seen in consultation by another practitioner. By this time there was marked opisthotonos, and at times there was spasm. The temperature was 101·6°, the pulse 140, and the respiration jerky. No uterine or any other cause for the tetanus was discovered. Counter-irritation over the spine was tried, but with no effect. She continued to grow worse, and on the 15th, during a marked spasm of all the muscles, death took place by apnœa. The body was drawn almost into a bow, and the angles of the mouth were drawn backward and upward. At no time during life was the temperature above 102°, but twenty minutes after death it was 105°, and twenty minutes later 107·4°, which was the highest point reached. Dr. Getter asks if the exposure to the draught could have had anything to do with the disease, the heat of the day being from 90° to 100° in the shade.

The New York Post-graduate Medical School and Hospital.—We learn that Dr. David C. Bryan, of the Almshouse Hospital, has been appointed demonstrator of the normal and pathological anatomy of the nervous system. Having had the opportunity of seeing a number of beautiful stained sections prepared by Dr. Bryan, we can congratulate the school on having secured that gentleman's services in the important department mentioned.

The Health of Boston.—During the week ending Saturday, October 23d, there were 177 deaths. The number of cases and deaths from infectious diseases were as follows: 29 cases of diphtheria and 7 deaths; 16 cases of scarlet fever; 33 cases of typhoid fever and 4 deaths; 8 cases of measles. There were also 27 deaths from consumption, 12 from pneumonia, 9 from heart disease, 9 from bronchitis, 5 from marasmus, and twelve from violent causes. During the month of Septemqer there were 181 cases of typhoid fever, against 209 in September, 1885.

THERAPEUTICAL NOTES.

The Treatment of Whooping-cough by Insufflation.—In the Section in Pædiatrics, at the recent Assembly of German Naturalists and Physicians ("Dtsch. Med.-Ztg.," October 7, 1886), Herr Michael recommended this method of treatment, especially with benzoin, as promising alike in recent cases and in those of several weeks' standing. He thus summarized his views: 1. Whooping-cough is a reflex neurosis of the nose, the nasal mucous membrane reacting under a specific irritation. 2. It is possible to ameliorate and abbreviate the disease with insufflations of powders. 3. The end is attained by the mechanical and therapeutical action of the powder. 4. Adenoid vegetations in the naso-pharynx have an influence on the result, and the first insufflations are of prognostic value. Relapses are apt to occur from wetting the feet, exposure, or a too early abandonment of the treatment. 5. If the paroxysms rapidly become less severe at the outset, the result is sure; if they decrease in frequency, the course of the disease will be shortened; if they remain the same or are somewhat increased in number, success is not to be looked for.

Rhubarb in the Treatment of Thread-worms.—Dr. Sidney Martin ("Practitioner," October, 1886) thinks that in many cases, although the irritation about the anus may have been relieved by injections, the persistent irregularity of the bowels and disturbance of sleep are owing to the fact that worms still remain in a higher part of the intestine. In such cases he has found that small doses of rhubarb are efficient in bringing the worms away and in regulating the bowels, so that in most instances injections may be dispensed with. He has found the following formula most useful, varied slightly according to the age of the child:

Tincture of rhubarb	3 minims;
Magnesium carbonate	3 grains;
Tincture of ginger	1 minim;
Water	to 1 drachm.

This amount is to be taken two or three times a day, according to the effect on the bowels. Whether the rhubarb acts as a vermicide or simply by "moving the worms on," he is unable to say.

A Proposed Modification of the Compound Licorice Powder.—Dr. Martin Oxley, of Liverpool ("Lancet," Oct. 2, 1886), has found the compound licorice powder productive of severe griping, especially in young patients. He therefore proposes to substitute aniseed for the fennel, and to add a fourth part of ginger, so that the formula shall be:

Senna, Licorice root, each	2 parts;
Anise fruit, Sulphur, each	1 part;
Sugar	5¾ parts;
Ginger	¼ part.

A Dental Calmative.—The "Union médicale" attributes the following formula to Gaudet:

Chloroform	14 parts;
Mastic in tears	8 "
Peruvian balsam	5 "

Dissolve the mastic in the chloroform, and add the balsam. Two or three drops of the liquid are to be placed on a pellet of cotton, which is to be introduced into the cavity of the aching tooth.

THE NEW YORK MEDICAL JOURNAL, November 6, 1886.

Lectures and Addresses.

LECTURES ON
THE DIAGNOSIS AND TREATMENT OF DISEASES OF THE CHEST.

DELIVERED BEFORE THE ASCLEPION CLUB,

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Lecture VI.

(*Concluded from page 452.*)

Supposing that we have a well-marked case of valvular disease to deal with, what should be the general plan of treatment?

We should first ascertain the nature of the lesion, then its extent, and the condition of the cardiac muscle—*i. e.*, whether there is good compensatory hypertrophy, or dilatation with or without fatty degeneration. Our attention should next be directed to the collateral diagnosis, which concerns the state and action of the other viscera, the lungs, the liver and *primæ viæ*, and the kidneys. This will enable us to determine approximately, though not accurately, to what extent the symptoms present owe their gravity to the mechanical impediment to the circulation, and how much is due to other causes, such as fatigue, gastro-intestinal derangement, renal embarrassment, or the action of such general causes as exposure, alcoholism, or any of the various infective diseases.

If the patient is suffering considerably, or if dangerous symptoms are observed, the first and most important measure is to secure rest. He should be put to bed and kept there until it is evident that as thorough recuperation as he is capable of has been secured. This is sometimes the only treatment required, particularly in the case of those who have to work for their living. It is a common occurrence for such patients to present themselves at the hospitals, seeking relief from the most distressing and even alarming symptoms. On examination, we may find a mitral or aortic lesion, without great hypertrophy or evidence of dilatation, but associated with an irregular or intermitting pulse, and, if the mitral orifice be the seat of the lesion, dyspnœa, cough, and the evidences of obstructed portal circulation.

These symptoms result from overwork, improper diet, or catching cold. If these patients are simply kept in bed, the diet properly regulated, and, may be, some appropriate tonic administered, they will gradually improve, and it will be found, after full recuperation has occurred, that the lesion is not very extensive, and that the prospects of living are good, provided they can take proper care of themselves. Such cases are not confined to the hospitals or to the working classes. They are frequently met with in private practice and among those who are not compelled to labor.

Children suffering from cardiac disease are often sent to school and put in competition, both muscular and mental, with those who are their physical superiors. They break down under the strain, and suffer from symptoms the gravity of which is out of proportion to the amount of disease present. They should be compelled to rest until the circulatory and nervous systems have had time to regain their normal tone, and then receive definite directions as to their future activities.

Ladies who are affected with the milder forms of disease often kill themselves by over-exertion, either in the fulfillment of their domestic duties, or in trying to keep up with the demands of social life.

Business men commit the same error. All such cases are to be treated by rest and the adoption of appropriate hygienic measures. It is worth while in this connection to remember that, aside from the direct effects of the anatomical lesions, functional derangements are of very frequent occurrence with diseased hearts. And these functional disturbances cause an aggravation of the proper symptoms of the diseases which they complicate, and often give them a more threatening aspect than normally belongs to them. These functional disturbances are frequently due to overwork and fatigue, and disappear when the long-needed rest is finally obtained.

If the disease is so far advanced that the cavities of the heart have become dilated, the only hope of improvement is in rest for the disabled organ, and the first step toward the attainment of this is to diminish the activities of the body at large, for there is no active work done by any organ but requires an increased amount of blood for its accomplishment, and, unless the organ be a comparatively insignificant one, increase of its function will necessitate an augmentation of the labor of the heart. By securing rest, with good nutrition, we may sometimes succeed in diminishing the dilatation, and in securing a return of its proper tone to the cardiac muscle. Where hypertrophy is excessive, or in cases of simple hypertrophy from overwork, I think it may be possible, by means of rest and a properly selected diet, to obtain some diminution of the size of the organ. When the heart disease is associated with the widely distributed lesions which depend upon the gouty diathesis, or with renal disease, a preliminary period of rest may be of the utmost advantage, for it affords the best opportunity for the employment of eliminative measures and the restricted diet which is sometimes a necessary introduction to the treatment.

The next most important indication is to set the digestive apparatus in order and prescribe a suitable diet for the patient. This is necessary on three accounts. In the first place, the presence in the blood of abnormal substances, such as uric acid and its compounds, is a constant source of irritation to the vascular and nervous systems, and may not only cause an aggravation of the symptoms of the disease, but actually induce further abnormal changes in the heart. In the second place, the irritation of the stomach and intestine, or the accumulation of gas in them, may occasion very great reflex functional disorder.

In the third place, when the heart is diseased and degenerative changes in its walls have either already occurred or are about to make their appearance, it is very important, if we wish for success in our treatment, to have the general nutrition of the body as nearly normal as possible, and this can only be accomplished by attention to the primary assimilation, in connection, of course, with the respiratory and excretory functions. This treatment is especially called for in mitral disease, because of the tendency of lesions of that valve to induce abdominal derangements. The secondary effects of aortic lesions on the pulmonary and systemic venous circulations are produced at a later date, and when they occur the disease has already so far advanced that the chances of success in its treatment are very meager. But, in the majority of advanced cases, there is disease at both orifices, and we have to meet the indications arising from both.

The care of the digestive apparatus in patients suffering from cardiac disease is of so much importance that I shall venture to enter somewhat into details regarding it. If the tongue is red and coated, the abdomen tumid, and the epigastric region tender on pressure, active means must be adopted to relieve the swollen condition of the gastro-intestinal mucous membrane and abdominal glands. In such cases it may frequently be observed that a bloody mucus collects in the mouth and throat during sleep; the gums and buccal mucous membrane generally are swollen and red, the breath is "feverish," and the patient complains of loss of appetite and a disgusting taste in the mouth, particularly on rising. The liver is sometimes swollen, so that it can be distinctly felt projecting below the costal cartilages, and perhaps somewhat tender upon pressure. In some instances careful observation will enable us to detect a pulsation in the hepatic region. The spleen, as we know from post-mortem examinations, is swollen, though this can not always be made out during life by percussion of the abdomen. The amount of urine passed is usually small, because the arterial pressure is diminished. When these phenomena are observed, the treatment should be inaugurated by the administration of a mercurial cathartic.

I generally give from ten to fifteen grains of the mild chloride with jalap or the bicarbonate of sodium; if the latter, following it up with a mild saline should it not operate freely. If the patient is very weak, it may be better to give a smaller dose of mercury, and some one of the warm vegetable cathartics after it. When the gastro-intestinal and hepatic disturbance is very great, it may be well to follow the cathartic by small doses of calomel, say one twentieth or one twelfth of a grain, with the bicarbonate or salicylate of sodium, five grains every two or three hours, taking care that the bowels are kept mildly relaxed. Every morning a saline may be given with hot water. The sulphate of sodium is good, but its horrible taste nauseates some patients, and they will vomit it. The phosphate of sodium is very useful in these cases, on account, apparently, of its action in liquefying the mucus of the intestinal and biliary passages.

If the gastric irritation is so great as to cause considerable tenderness and intolerance of either food or medicine, small doses of codeine—say one sixth of a grain—may be given with the calomel and sodium salt, due care being taken to avoid constipation. At the same time, it is well to use mild counter-irritation, by means of mustard, over the stomach and liver. To relieve the thirst, small quantities of water, or of the carbonated mineral waters—Vichy and Selters—are usually efficacious.

The diet should be reduced to a minimum temporarily, and should be the simplest possible. The best of all is peptonized milk, if the patient will take it. It should be given in small quantities, at short intervals—say half a teacupful every two hours; or, if the stomach is very intolerant, a tablespoonful every half-hour. Milk and Selters, or milk and Vichy, is very acceptable to many, and may be alternated with or substituted for the peptonized milk. If neither of these is attainable, or if the patient can not take them on account of their taste, then milk and lime-water, in equal parts, may be used. The quantity of lime-water should be large enough to insure against rapid coagulation in the stomach. It may be reduced when the symptoms of irritation have diminished, so that only one part of lime-water is put with three parts of milk. I doubt if much benefit can be expected to result from the use of lime-water if it is given in a smaller proportion than one to three, or one to four. Kumyss might be used in some cases where a mild stimulant is needed, but the objection to it is the difficulty in obtaining a good article. I have not had much experience with it. Barley-water, or barley-water with milk agrees well with almost all patients.

When the abdominal engorgement has been reduced and the symptoms begin to ameliorate, other easily digestible substances may be added to the diet; but this must be done very cautiously, always remembering that there is far more danger of giving too much than too little, and that anything given in excess of the digestive capacity of the patient will inevitably do harm. A moderate amount of stimulants may be given, if the necessities of the case seem to indicate them; but they should be given in stated doses, at regular intervals, in the same way as the other medicines. Whisky is the best. It should be given in plain water, or some carbonated water, and without sugar.

The plan of treatment here indicated, but all the details of which can not be given, will, in many cases, give the most gratifying results, even without the aid of other remedies—such as the cardiac excitants.

It is interesting to observe how, under the combined influence of rest and proper attention to the digestive apparatus, the cardiac irregularity will disappear, the tongue and mouth become clean, and the relaxed and dilated abdominal vessels regain their tone. I have seen a swelling of the liver so great as to give rise to a hard mass in the epigastric region, which, on account of its prominence and resistance, suggested the presence of malignant disease, become imperceptible, after two or three weeks, without the employment of any other means than those mentioned above, except that during the last few days of that time some digitalis was administered.

The signs of dilatation of the heart cavities will also become less prominent. The nervous and muscular mechanisms of the circulatory apparatus, unless reduced to the last extremity of exhaustion, or unless degenerative changes have occurred, are capable of recuperating and regaining their tone, if the work required of them is reduced to a minimum, and they are at the same time supplied with good blood, unincumbered by the abnormal products of defective digestion. The increase of the vascular tonus is, moreover, manifested in the increased quantity of the renal secretion. The influence of the mercurial in the inauguration of these vital improvements is, I believe, considerable. We all know its effects on the abdominal glands, but its influence on the vaso-motor nervous mechanisms is only apparent in the results which follow upon its use. Dr. Stokes, in the chapter on treatment in his classical work on "Diseases of the Heart," calls attention to this favorable action of mercury, though his descriptions, like most of those given by the writers of his time, are not sufficiently definite to serve as guides in therapeutics. It is, however, valuable evidence, from a most reliable witness, of the surprisingly successful results obtained, in many cases of valvular disease, by the use of mercurials. When it is advisable, for any reason, not to use this drug, the vegetable cholagogues may be substituted for it; but my own experience has not, so far, led me to expect such prompt benefit from their use as from the exhibition of mercury.

Besides rest, careful attention to the digestive organs, and such other general and particular hygienic measures as will be suggested by the intelligence of the practitioner, there are certain medicinal agents which may be employed for their more direct influence upon the heart and blood-vessels; but their administration should always, if possible, be preceded by the preparation of the body as described above.

It very often happens, in cardiac as in other diseases, that in our treatment we are obliged, to some extent, to retrace the course which has brought the patient to the condition in which we find him. It is not always that we can proceed at once to the treatment of the fundamental lesion with the prospect that, when it is improved, the secondary disturbances will rapidly subside. The secondary derangements may be of such a nature that they will react upon the primary and tend to aggravate it and embarrass our attempts at its amelioration. This is particularly the case with valvular diseases of the heart. The secondary disturbances, especially those of the abdominal viscera, are of such a nature that, if they existed and the heart were otherwise normal, they would exert a very injurious influence upon it, and seriously interfere with its functional activity. But, when the heart is already extensively diseased, the reaction of these morbid conditions of the abdominal viscera upon it creates great functional disorder, or aggravates that already existing, and materially interferes with the action of any drugs which may be given for their direct effect upon it.

Among the drugs that are used in the treatment of diseases of the heart, *digitalis* holds the first place. This is due not alone to its special action, but also to the fact that it has been so long in use and is so well understood by the profession at large. Other substances will probably assume equal importance when we become equally well acquainted with their actions upon the body. It is of use in all cases where the action of the heart is feeble, the arterial pressure low, and the blood unequally distributed in the body. It is also of service in regulating the heart when its contractions are very irregular or intermitting, *if this is due to debility*. It should be reserved for use when it is necessary to give tone to the debilitated organ, supporting it till there is time for recuperation. It may be used in cases of great rapidity, with imperfect performance, of the circulatory function, because, by slowing and regulating the beat, it is made to work to better advantage and accomplish more with the expenditure of a given amount of energy. This is particularly the case in the treatment of mitral disease, where the tendency is to greatly increased rapidity, with diminished efficiency of its action. By prolonging the diastole, it gives time for a better distribution of the blood in the heart, while, by giving an increased tonicity to the walls of the auricle and ventricle, and increasing the force of their contraction, it secures a more complete emptying of the blood from the auricle through the ventricle into the aorta. It also, by increasing the vigor of the contraction of the right ventricle and, probably, of the pulmonary vessels, causes an improvement in the pulmonary circulation.

Digitalis should not be used continuously, for several reasons. It is probable that it may increase the rapidity with which the hypertrophy is developed. Again, if it is given constantly, so that the body becomes accustomed to it, we may lose some of its beneficial effects when, in an emergency, we have most need to avail ourselves of them. Another and a very important reason is that, under the supporting action of digitalis, a person suffering from cardiac disease may be tempted to do far more work than is within his proper strength, and his life be very materially shortened; as if a man should keep himself at work by the constant use of alcohol when he is in need of rest. The time will soon arrive when the stimulant will no longer act, because the reserve energy which it liberated has been exhausted, and he will sink into a collapse which admits of no recuperation. Such a case has come under my notice within a few months. The patient was a young man from the north of Ireland engaged in the retail grocery business. He had an inherited tendency to rheumatism, and had suffered from one acute attack, which was promptly controlled by the salicylates, and several subacute seizures, which yielded to mercurial cathartics and dilute hydrochloric acid, with attention to the diet. In the spring of 1884 I examined his heart, but could detect no disease. In September, during my absence, he was seen by my friend, Dr. William Wallace, who found an aortic regurgitation and prescribed for him. A short time afterward an officious friend took him to a practitioner who directed him to take digitalis constantly and to keep on with his work, which consisted, among other things, in getting up at two or three o'clock every morning but Sunday, winter and summer, and driving to New York to market, where he loaded his wagon, lifting quite heavy weights. On his return he always assisted in taking off the load. By taking the digitalis continuously, he kept his heart in motion for about a year; but, in September, 1885, it began to fail, and the efforts of Dr. Wallace and myself to secure some recuperation were unavailing. The dilatation was extreme, the abdominal circulation was very much deranged, and attacks of angina were of daily occurrence. He died about fourteen months after Dr. Wallace first diagnosticated the existence of valvular disease, and the entire course of the disease had been run within eighteen months, as, previous to that time, I had been unable to detect any valvular lesion.

As long as a patient is able to be up and somewhat active, the digitalis should only be given at intervals, to combat the tendency to dilatation. When its beneficial effects have been obtained, it should be discontinued for a time, and replaced by such general tonics as iron, the cinchona preparations, and nux vomica, either singly or combined.

To properly regulate these matters, the patient should be seen frequently. Digitalis is contra-indicated by the existence of, or tendency to, overcompensation. This may occur in the early stages of aortic disease, and result in palpitation, pain in the præcordia, flushing of the face, a strong, full pulse, and the distress occasioned by the abnormally strong pulsation.

In such cases we must resort to a non-stimulating and very easily digestible diet, inasmuch as the least reflex irritation from the stomach may aggravate the symptoms. Rest is also necessary, and may be combined with the administration of sedative drugs. Aconite and the bromides are of use, and frequently give very satisfactory results, but I have been particularly well pleased with the temporary exhibition of the fluid extract of veratrum viride, from two to five drops, every two or three hours. Opiates may be employed for their immediate effect if the heart is very irritable. These functional derangements are generally to be treated the same as they would be if valvular or other structural disease were not present, unless they seem to be due to debility, when digitalis and other tonics and stimulants are to be employed. It is sometimes recommended to apply poultices of digitalis-leaves to the præcordia in cases of cardiac failure and irregularity. I think that any other poultice will do as well, and mustard is decidedly better. If we chose to adopt the endermic method of Bouillaud, we might get some result from its use, but it would be scarcely justifiable, now that we have the hypodermic method of medication.

The fluid extract of convallaria is becoming better known, and, if the preparation is good, can be relied upon to produce about the same results as digitalis. It is often of great service where a tolerance of digitalis has been established. The dose of the fluid extract of convallaria is about the same as that of the tincture of digitalis. To control the functional disturbances of structural disease, I have used the fluid extract of *Cactus grandiflorus*, prepared by Messrs. Parke, Davis & Co. I am unable to say, as yet, to what extent we can depend upon it, but in some instances it has appeared to me not only that it regulated the cardiac rhythm and increased the force of the beat, but that it had some diuretic effect as well. There is very little reliable information to be obtained in regard to it, but it is deserving of a more extended trial.

Besides the drugs mentioned here, there are others which are valuable on account of their general tonic effect. The most important of these is iron. We all know the tendency to anæmia that accompanies valvular disease, especially when it is located at the mitral orifice. When the preliminary treatment of the alimentary canal, detailed above, has been carried out, the administration of ferruginous tonics may be begun. The best preparation is the tincture of the chloride, given with glycerin and water. For children, the milder, scaly compounds are very well suited—either the ammonio-citrate, potassio-tartrate, or pyrophosphate. The vinum ferri is also available.

The next most valuable of the general tonics is arsenic, not only because of its constitutional effects, but because of its influence upon the cardiac nerves, by which it corrects rhythmic disturbances. Arsenic may be given for a long time, in moderate doses, and may be combined with iron, quinine, or the other tonics.

From this hasty sketch of the treatment of well-advanced cases of cardiac valvular disease we will turn to those cases of more recent origin, in which the compensation is good, and in which no marked secondary symptoms have as yet appeared. Many such patients are seen every by physician, either shortly after they have been treated for acute rheumatism, or as wandering office patients. These persons require no special treatment with digitalis or the other cardiac excitants.

Our first duty is to ascertain the cause of the endocarditis, if possible, and remove it or prevent its recurrence. The patient should be carefully warned against any exertion that might be injurious to the heart, and should receive exact directions as to his diet. After the digestion has been attended to, if any irregularity exists it may be corrected by the use of arsenic, with other tonics, or by the *Cactus grandiflorus*. Palpitation may be relieved by means of the bromides, with aconite or veratrum, or by small doses of codeine. These agents, particularly the depressants, should only be used temporarily, and while the patient is kept under observation. As soon as the irritability is relieved they must be replaced by arsenic, iron, and the other roborant drugs. If such persons could be kept under control, the recurrence of endocarditis prevented, and their general hygiene regulated, they might live on indefinitely. When the capacity of the heart is diminished in any direction, if the demands upon it could be nicely adjusted, it might continue to live as long as a healthy organ. Though it is impossible to accomplish this ideal result, we should aim at obtaining as close an approximation to it as possible.

We must now briefly consider the other extreme of the course of valvular disease—viz., when compensatory hypertrophy has reached its limit, dilatation has occurred, and the weak and degenerated muscle begins to falter at its work. The most important point to bear in mind, when we encounter a patient who has the appearance of being in this forlorn state, is that things may not be so bad as they seem at first sight.

Unless a case has been watched for a long time it is difficult to say how much recuperative power may be left. Sometimes, when the symptoms are very alarming, entire rest, with judicious treatment, may lead to very marked improvement. The symptoms may have been brought on by great fatigue, disturbance of the digestive apparatus, or chilling of the body, and not be wholly due to degeneration or final exhaustion of the cardiac muscle.

The rule should be to treat every case, however desperate, as if there were some hope, because this can do no harm in a hopeless case, and may prolong the life of one whose case is not so bad. Complete rest in bed should be procured at once, if the patient is able to get into bed. Then we should not be afraid to use hydragogue cathartics and calomel. The doses should be free, but not excessive. These patients, like those with renal dropsy, bear cathartics surprisingly well—far better, in fact, than healthy people. They should, at the same time, be supported by diffusible stimulants, with digitalis, and, if thought proper, opium. I have found a combination of morphine, spirits of chloroform, aromatic spirits of ammonia, and tincture of digitalis very efficacious. At the same time, warmth may be applied to the præcordia and the epigastric region, and some very plain food, with whisky, may be given. For a quick effect upon the heart, a hypodermic injection of morphine is very good.

Original Communications.

ABNORMAL CONDITIONS OF UNCERTAINTY.*

By WILLIAM A. HAMMOND, M. D.

Under the designation of *maladie du doute*, Falret, the elder, described several years ago a form of mental derangement which, since he wrote on the subject, has attracted the attention of several French authors, but which has not yet received much notice from alienists of other countries. In 1879 I read before the New York Neurological Society a paper on a disorder to which I gave the name of "mysophobia," in which, as the designation signifies, there was a fear of contamination as the predominating feature. This affection has some decided analogy with the one that I now propose to bring, through the description of a case, before the Society of Medical Jurisprudence and State Medicine. It is, however, a different disease, and has, moreover, medicolegal relations which entitle it to the consideration of this society. Several cases similar to the one the details of which I have made the basis of this communication have been under my charge, but the present is in many respects the most interesting, and I have, therefore, selected it for attention this evening.

Mr. X., engaged in a large manufacturing business, consulted me for a mental disorder which, as he said, he had suffered from for several years. It was mainly characterized at first by a painful feeling of uncertainty in regard to any act of the slightest importance, either in his business or his daily life, that he was called upon to perform. Thus, if a check had been signed by him, he was in doubt as to whether he had filled it up for the correct amount, or had dated it or signed it properly, or had drawn it to the order of the right person. As he usually had in the course of the day several checks to make out and sign, this one matter gave him a great deal of trouble. He would go over them all before sending them out, not only once but many times, and, after he had mailed them, would be the victim of anxiety amounting to actual distress lest he had drawn them improperly, or directed them to the wrong persons. This led him to write numerous letters of inquiry, and to pay many visits to the bank in efforts to rectify his imaginary mistakes. So long as the checks had not passed beyond his control he was not subject to apprehensions in regard to their correctness, but, as soon as they were dispatched, his doubts and uncertainties arose, and he was rendered miserable till some new source of perplexity took the place of the old. Upon several occasions he had produced serious inconvenience in his business by stopping the payment of checks that he had drawn, as he feared, improperly, and once a lawsuit was initiated in consequence of his interference.

Again, his feeling of doubt is often excited after he has made a purchase of the raw material which he uses for manufacturing purposes. He fears he has paid too much for it, and looks over the price-current a hundred or more times in the course of the day, and examines his samples to see if they are fully up to the standards that he had in mind when he made his bargain. Then he bothers as to whether or not the material, when furnished, will agree with the samples, though this is rather unusual, as he does not in general entertain doubts relative to others, but solely in regard to himself.

Subsequently he reached the point of being doubtful, not only in regard to his recent acts, but to those of many years ago. Thus, he began to be uncertain as to whether his marriage had been properly performed, and hence whether it was valid or not. This led to doubts relative to the legitimacy of his children and to their right to inherit his property in the event of his death without a will. To remedy this imaginary difficulty, he made a will and confided it to the care of a friend, but he became so disquieted with apprehensions in regard to its not having been drawn in accordance with his instructions and properly witnessed and signed, that he was obliged to refer to it two or three times a day, and eventually became so annoying to the gentleman who had it in charge that he refused to keep it any longer in his possession.

There was not, after the affection reached its height, a single act connected with which there might have been some danger to his comfort or life that he did not experience the most painful doubts about. After his morning ablutions he was never sure that he had turned off the water, and, even after he had examined closely into the matter and assured himself that the faucet had been closed, the question would come up in his mind as to whether or not he had sufficiently inspected it, and then he would be obliged to go back and look at it and handle it again. Then the suspicion would arise that in his last handling he had inadvertently opened it after closing it, and again the inspection would have to be made. At night it was the same thing with the light, and he has often passed the greater part of the night in vain endeavors to acquire certainty relative to the matter of having turned off the gas, or of having dropped a spark from the candle that he had used in going up-stairs to his room.

After a few weeks another source of discomfort arose, and that was a mental interrogation of himself as to why certain conditions or circumstances existed, and this was especially relative to those matters which did not admit of solution. Thus, when told that a friend was suffering from inflammation of the left lung, the question at once arose in his mind, Why should the left lung be affected rather than the right? and this he asked himself a hundred, yes a thousand, times a day, working himself almost into a state of maniacal excitement over his inability to answer the question. Then this condition of inquiry was, little by little, extended to almost every event that came under his notice, and at last reached the problem of his own existence and that of the world and the universe. A dog could not cross the street in his presence without the question of why it crossed at that particular place and not an inch or two on one side or the other arising in his mind. The fact that the piece of meat on his dinner-plate covered a particular part of the design, that the coffee in his cup was of a certain shade of color, that the piece of butter that he cut off was of this or that shape, that an explosion of a steamboat took place in the morning instead of the evening, or at some place in the river instead of at some other place, and a thousand other interrogatories, were constantly coming up in his mind, to be succeeded by a thousand others of like character. As to his own existence and that of the universe, it was always before him. "Why did God create matter?" "If God had it to do over again, would He create matter?" "Why was he born in the year 1843?" "If he had not been born in 1843, what year would he have been born in, or would he have been born at all?" "If his mother had never been born, would he have been born of some other mother, and, if so, who would have been his mother?" "Would he in such a case have been himself?" "If he had been born before his elder brother, would he have been himself or his brother?" and so on interminably day after day, while at the same time the doubts with which the affection began were manifested in regard to almost every subject.

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* Read before the Society of Medical Jurisprudence and State Medicine, October 14, 1886.

The onset of the disease was sudden, and previous to its appearance he was in good health. He comes, however, of a family of which several of the members have had neuroses, such as migraine, chorea, and epilepsy. At times he suffered from wakefulness, headache, and dizziness, and there was almost constantly since the beginning of the disorder what he called a "vague sensation" in his head, and which I interpreted as being something of the nature of mental confusion.

Besides the lawsuit to which his uncertainty about his signature to a check gave rise, he was upon one occasion placed in a state of great annoyance, to say nothing of the trouble he gave to other parties. He was a witness in an important suit, and it became necessary for him to identify his signature to a material paper. Although he recollected all the circumstances of the case, and that he had signed a document like the one he held in his hand, he would not say that that particular signature had been made by him. It was like it, it probably was his, he had signed some such paper, but that the one there before him was his he would not say. Finally he admitted that it was genuine, but retracted the opinion after renewed examination, and left the stand declaring that probably it was not his signature. In less than an hour, in a state of great trepidation, he returned to court and requested that he should be again put on the stand. This was done, the paper was given him, and, after examining the signature for several minutes, he retracted his former opinion and declared that he had signed the writing in question. This assertion he recalled, however, before he left the stand, so that the case was decided without his evidence.

It will, I think, readily occur to the legal members of the society that there are other points connected with medical jurisprudence that might arise in connection with a case similar to that the details of which I have considered this evening. As to the morbid condition giving rise to the symptoms described, it is almost impossible to speak with any degree of certainty. We have all known persons who within the limits of health exhibited doubt and vacillation in regard to many matters they had had brought to their consideration. A document is read over and over before they can decide whether or not to sign it, and when the name is written there is like uncertainty as to the character of the signature; a drawer is locked, but it is difficult for such a person to be assured that it really is securely fastened; a dose of medicine is taken, and there is an agony of apprehension for hours lest the wrong bottle has been used or a few drops too many or too few swallowed; as a witness in a court of justice, the statements made are always guarded by an expression of uncertainty, such as "I think so," "I am not sure," "I don't recollect," or something similar, as though there were a constant fear of committing perjury in the mind. Between such a state and that morbid condition of uncertainty to which I have called attention there is apparently only the difference of degree, but all our knowledge of brain and mental disorders goes to show that some change in the structure of the organ has been initiated, and the physical symptoms—the pain, the vertigo, and the insomnia—point to congestion as the most probable condition. The effects of treatment based on this hypothesis are such as to give decided confirmation to this view. Most of the patients that have come under my charge have been greatly benefited by the use of the bromides, ergot, and local blood-letting, and the one referred to in this paper entirely recovered under like treatment. This part of the subject, however, is not pertinent in a communication addressed to the Society of Medical Jurisprudence and State Medicine, and I therefore refrain from a further consideration of the therapeutics of the disease in question.

It is very evident that the mental disease described in this communication is different from that to which—from its characteristic symptom, indecision—I have given the name of *aboulomania*. In this latter affection there is an impossibility of so exerting the will as to cause many simple actions to be performed. Thus, in one of the cases the details of which I have related, the patient could not undress himself at night or dress himself in the morning, from an inability to decide which article of clothing to take off or put on first. In another, if there was an alternative to any suggested course of action, a decision was out of the question; and in another, the patient, a business man of this city, went down to Wall Street regularly every morning with a large sum of money to invest, and yet invariably returned at night without having determined what to do with it. These cases and similar ones are instances concerned with acts that are to be performed, while those like the one forming the subject of this paper refer to acts already done. Both, however, as standing on what may be called the doubtful ground between sanity and insanity—though both are in fact in the domain of mental unsoundness—are worthy of the fullest consideration by this society.

The Cocaine Habit.—Dr. J. B. Mattison, of No. 314 State Street, Brooklyn, writes to us as follows: "If any reader of your journal has met with a case of cocaine addiction, and will send me the fullest details at his command, I'll thank him for the courtesy, reimburse him for any expense incurred, and give him full credit in a coming paper."

The Medical News Visiting List for 1887 has reached us, and we observe the handsome appearance and convenience of arrangement by which previous issues have been characterized.

THE LARYNGEAL IMAGE

*As seen in Photographs taken during the Production of Tones in the Singing Voice, with Lantern Exhibition of Photographs.**

By THOMAS R. FRENCH, M. D.,
BROOKLYN.

Many contradictory opinions are held by writers on voice production regarding the appearances of the larynx while producing tones in the singing voice. I am unable to explain the diversity of opinion, except by the assumption that in some instances the facts were incorrectly observed, and in others that many conclusions were drawn from the study of a single larynx, or at least but a few larynges, for the observations are found to be correct in certain classes of cases, but far from correct in many others.

My attention was first called to this subject by the revelations made in a large number of photographs of the larynx, taken while in the act of producing tones in the singing voice. The statements, therefore, which I am about to make are founded upon careful studies not only with the laryngoscope, but also of many series of photographs. Some of these series I have had mounted and will submit to you for examination, while many points will be illustrated with photographs thrown upon the screen.

Different individuals often employ different mechanisms in the production of the voice, and therefore the appearances of the larynx under similar circumstances are often very different. In studying the anatomy of the larynx, we find that, in the normal state, there are always certain structures, but do we ever find the shape and groupings of these structures in different subjects exactly the same? I believe not, any more than we find the shape and groupings of the features of any two faces exactly alike. The minute differences in the size, shape, and relation of the various structures give rise to some difference in the movements of the parts, and therefore it will be found that no two larynges act exactly alike under similar circumstances. Suppose we compare, with the aid of the laryngoscope, the larynges of two subjects having the same class of voice. In the first place, we find that the relative positions of the parts vary somewhat, and therefore the shapes of the larynges as a whole. We also find that the movements of the various structures in the acts of respiration and phonation differ somewhat. Suppose now that we place a mirror in each of the throats, and examine them at the same time while they are singing the same tone. We find that there is some difference in the positions of the vocal bands. The difference may be marked, or it may be so little that it will be hard to see. But there will certainly be a difference.

It is taught by many writers that certain changes always take place in the positions of the vocal bands at certain notes in the scale as the voice ascends, some asserting that these changes occur suddenly. That certain changes do occur in many larynges while singing up the scale can be easily demonstrated, and some of these will be shown here to-day; but these changes are, I believe, almost always gradual, not sudden. In several subjects whose voices have not been trained, I have detected a slight sudden change in tension of the vocal bands at certain notes, where a break in the voice could be distinctly heard. Though I have looked for it in other untrained voices under similar conditions, a sudden change, if it occurred, was not apparent in the laryngoscopic mirror. In most larynges, whatever the peculiarity in the shape of the glottis, in the production of the lower tones of the voice the chink is open widest in its posterior part. In the soprano and tenor, in the production of the middle tones, the chink is usually linear in shape; and in the high tones the chink is open widest in front, and the glottis may or may not be closed behind. In contralto and bass voices, however, the glottic chink may not become linear even in the highest tones. Both by reflected and by transmitted light the vocal bands are seen to be thick and wide in the production of the lower tones, and to grow gradually thinner and narrower as the voice inclines upward. In all larynges the vocal bands are shortest in the production of the lower tones and longest in the middle tones, and grow shorter again in the upper tones.

The variations in the shape of the chink of the glottis as the voice ascends the scale will depend upon the mechanism used by each individual. For instance, if, while producing the lower tones of the bass voice, the chink has an elliptical shape, and the singer has only an ordinary compass, it is apt to continue elliptical throughout the range, though diminishing greatly in size. If, however, the singer has a great compass, the chink may become linear in the upper notes. If, again, there is a well-marked posterior opening in the production of the lower tones, that opening may continue to appear, in gradually diminishing size, in all the tones above. If, again, in the production of the lower tones, the edges of the vocal bands are straight and the chink is open widest in its posterior part, it usually changes gradually into a linear slit which continues through the middle and upper portions of the compass in the male; but in the female, at or about C, treble clef, third space, though it may be as low as F, treble clef, first space, it may change its shape to elliptical for a few tones; but this change is by no means constant, as I shall show in the photographs which will be exhibited on the screen. In the high notes of the female, in the majority of cases, the posterior portions of the vocal bands are brought into contact and the chink is closed from behind forward as the voice ascends. Again, in some larynges, in the production of the low tones, the chink may be open widest in its posterior part, and this portion remain the widest throughout the entire range of the voice. This is well shown in a series of photographs contained in a portfolio which I will submit for examination, showing the interior of the larynx while each note was being sung in a trained contralto voice from D, bass clef, third line, to A, treble clef, first line above staff, or two octaves and a half. The portfolio also contains a soprano, tenor, and bass series, all of which bear me out in the statement that sudden changes in the positions of the vocal bands, as the trained voice mounts the scale, are rarely apparent.

In the production of the so-called falsetto voice the shape of the chink of the glottis differs considerably in different larynges. A few examples will be shown upon the screen.

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* Read before the American Laryngological Association at its eighth annual congress.

The ventricular bands move toward the median line as the voice ascends. In some larynges the space between them is as narrow at certain notes, as in others of the same class, while singing four, five, or more notes above.

When most of the photographs which will be exhibited to-day were taken, the subjects were saying the vowel ē, as in this way the epiglottis is well raised and the interior of the larynx is displayed to the best advantage. In the exhibition of this afternoon it is my intention to call attention to the positions of the vocal bands only.

I will postpone a demonstration of the relative positions of the epiglottis for another occasion, when, after further study, they may be shown in another series of photographs.

I will not at this time express an opinion regarding the registers of the human voice. The study of the voice in this new light has just begun, and a large number of observations must be made before definite conclusions can be reached. The point which I desire particularly to make clear in this paper is that, while it is probable that there are certain laws which apply in all cases to the parts of the vocal bands which must vibrate for the production of certain tones of the voice, no single description of the laryngoscopical appearances which present in the production of tones in any part of either of the classes of voice will suffice to cover all cases. Larynges differ so much in size and shape as to make it impossible for the same conditions to appear in all. The student becomes confused by the differences in the descriptions by different observers, and still more so, perhaps, when he compares a larynx under observation with either of these descriptions. The result is that he often abandons the study, believing it to be a hopeless task. If in this demonstration I can in any degree assist in simplifying this study and in explaining the reasons for the differences in writers' descriptions, my present object will have been attained.

Of the eighteen subjects of whose larynges photographs will be shown to-day, four had received no instruction in singing; these were used in obtaining the falsetto series; eight had received considerable instruction and six were professional singers. We know that training effects a change in the positions of the various structures of the mouth, pharynx, and upper part of the larynx in the production of tones in singing, but it is difficult to determine whether it also effects a change in the positions of the vocal bands. A series of photographs taken before and after the subject had received a thorough course of instruction would be the only way in which this point could be ascertained. The mechanism is, however, often essentially the same in the production of some of the tones, in the same class of voice, in trained and untrained singers.

In securing the photographs for to-day's exhibition great care was taken to have the force of the blast of air and all other conditions the same.

The paper was illustrated with thirty-seven photographs. As these will not be reproduced at present, the author presents a brief description of their prominent features.

With the exception of the first four, which show types of the larynges of the four classes of voice, all of the photographs were displayed in pairs, as in this way comparisons could be made with greater ease. Two photographs of the larynges of different subjects, but having the same class of voice and while singing the same tone, were displayed at the same time upon the screen, as follows:

Soprano.—No. 1. While singing D, treble clef, first space, below staff. The first of the pair shows the vocal bands to be quite long and narrow, and the chink of the glottis open widest behind. In the second the vocal bands are wide and short, and the chink is linear in shape.

No. 2. Singing C sharp, treble clef, third space. In one the chink is elliptical, the vocal bands being bowed slightly outward. In the other the bands are bowed inward, the chink being open widest in front and behind.

No. 3. Same note as No. 2. In the first the vocal bands are long and narrow, and the chink is open widest in front. In the second the bands are short and wide and the chink is linear.

No. 4. Singing D, treble clef, fourth line. One shows the vocal bands to be bowed outward, while in the other they are bowed inward.

No. 5. Singing E, treble clef, fourth space. In one the edges of the vocal bands are parallel. In the other the chink is much narrower in the middle than in front and behind, the edges of the bands being curved inward.

No. 6. Singing A, treble clef, first line above staff. This is one of what are known as head tones. In the first photograph the vocal bands are seen to be bowed inward and are in contact in the middle, leaving narrow slits in front and behind. In the other the glottis is closed behind, leaving a narrow slit in front.*

No. 7. The last photograph of the soprano series shows the larynx while singing C above the high C, eleven tones above the treble clef. The vocal bands are very short and extremely narrow. The bands are in contact behind, there being a short and very narrow slit in front.

Contralto.—No. 8. Singing E, bass clef, third space. In both larynges the bands are short and wide; the chink is closed as far back as the posterior vocal processes, behind which there is a small triangular opening, which is much larger in one than the other.

No. 9. Singing G sharp, treble clef, second line. In the first the vocal bands are wide and long. The chink is linear as far back as the posterior vocal processes, behind which it widens out into a small triangular opening. In the second the bands are also long. Their edges are straight but not parallel, the chink being open widest behind.

No. 10. Singing F sharp, treble clef, top line. In one the vocal bands are short, quite narrow, and their edges are parallel and close together. In the other the vocal bands are long—nearly twice the length of the first—and wide, the chink being open widest behind.

Tenor.—No. 11. Singing E, bass clef, third space. In one the chink is open widest in front, while in the other its widest part is behind.

No. 12. Singing F sharp, treble clef, first space. In one the glottis is closed behind and open, in a narrow slit, in front. In the other the vocal bands are longer, and the chink is open in its entire length, being linear in shape.

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* In a series of photographs of the larynx of a soprano singer, while singing so-called head tones, taken at the residence of a Fellow in Philadelphia on the day after this paper was read, and in the presence of a number of Fellows and others, who judged of the purity and accuracy with which the tones were produced, the glottic chink is seen to be open in its entire length, though a trifle wider in front than behind. The edges of the vocal bands are perfectly straight.

Bass.—No. 13. Singing E, bass clef, first line below staff. The first shows the vocal bands to be short and quite wide. The interligamentous portion of the glottis is closed. A small diamond-shaped opening presents in the intercartilaginous portion. In the second the vocal bands are shorter and narrower, and their anterior two thirds are in contact. There is a triangular opening behind, but this is in the interligamentous portion of the glottis. The intercartilaginous portion is closed in this larynx. The entire length of the vocal bands can be seen in both larynges.

No. 14. Singing B, bass clef, second line. In one the vocal bands are long and wide. The posterior vocal processes are in contact, leaving a short elliptical slit in front and a small round opening behind. In the other the bands are not more than half as long, much wider, and there is an oval opening in the posterior portion of the chink. The vocal processes are not seen in this larynx.

No. 15. Singing C sharp, bass clef, first line above staff. In both larynges the bands are long and narrow. The chink is open widest behind in both, though much wider in one than the other.

"*Falsetto.*"—No. 16. Singing A, bass clef, fourth space above staff. In the first the chink is open in its entire length, but wider in front than behind. In the second there is an oval opening in the middle, the glottis being closed in front and behind.

No. 17. Same note as No. 16. In one the chink is open widest in the middle and behind, the space between these portions being nearly closed. The glottis is closed in front. In the other the vocal bands are long and narrow and the chink is open in its entire length. It is linear as far back as the posterior vocal processes, behind which there is a small triangular opening.

In concluding, the speaker said that the display must at least prove that there was a variety of mechanisms by which the same tones might be produced by different larynges in either of the classes of voice.

SZYMANOWSKI'S OPERATION
AS APPLIED TO
THE CURE OF URETHRO-PERINEAL FISTULA.*

By CHARLES McBURNEY, M. D.

Mr. President: I venture to bring the subject of this paper before the society, because I am convinced by experience that the operation which I shall describe is an exceedingly good one, and, although an account of it was published by its original designer as much as sixteen years ago, it has received but little attention from subsequent writers.

Persistent urinary fistulæ in the perinæum are not rare, occurring as the result of wounds of the perinæum, abscess and infiltration of urine due to stricture or to rupture of the urethra, and sometimes remaining after ordinary external urethrotomy, or median lithotomy. The immediate cause of such fistulæ as I shall refer to is almost always perineal section done by the surgeon for one reason or another. When urethro-perineal abscess has run its course without surgical interference, numerous fistulous tracts frequently remain, the case being usually complicated by stricture. For the relief of this condition no method is more popular than a median incision into the urethra, urine and pus then passing freely through the large recent wound, the irregular and outlying fistulæ usually closing rapidly. It is true that the complete removal of stricture of the urethra at all points anterior to the fistula, the systematic use of large sounds, the correction of defects in the condition of the bladder and urine, and the application of the actual cautery or caustics to the granulating edges of these unnatural openings, will often succeed in obtaining their closure. When little or no loss of tissue has occurred, the tendency to spontaneous cure is very great, as is noticed so often when external urethrotomy has been performed for the relief of uncomplicated stricture. And yet there remain certain cases, chiefly those in which considerable loss of substance has occurred, which are not benefited by any of the measures just referred to. For these cases a systematic operative procedure is required. In 1870, in his "Hand-book of Operative Surgery," Julius von Szymanowski described an operation for closure of fistula situated in that part of the urethra anterior to the scrotum. This operation was, as Szymanowski himself states, suggested to him by a somewhat similar operation already done by von Langenbeck, and is thus described: In the case of a fistula lying in the long axis of the penis, a straight incision is first made, beginning a short distance in front of and ending a short distance behind the fistula. The skin on one side of the fistula is then undermined with the knife, and made easily movable. A half-oval flap of skin on the other side of the fistula is then cut, freed from its epidermis, and dissected up, except at the edge of the fistula. The dissected flap is then to be inverted, pushed under the already lifted skin on the opposite side, held in place by sutures passed through the bottom of the pocket, and the movable skin drawn over it and also sutured. To provide for urination, Szymanowski recommends that an elastic catheter be passed into the bladder and tied. Szymanowski does not state in his book that he ever did this operation. In 1874 Dr. Robert F. Weir closed by this method a very obstinate ante-scrotal fistula in a patient at St. Luke's Hospital. This case is described in detail in a paper by Dr. Weir, published in the first April number of the "Medical Record" for 1878. Modifications of this method were also made use of by me in a number of cases of ante-scrotal fistula. Some of these were published in the July number of the "Illustrated Quarterly of Medicine and Surgery" for 1882, and others I have reported at meetings of this society since that time.

The patient already referred to as operated upon by Dr. Weir had also an obstinate perineal fistula. He left the hospital with his ante-scrotal fistula soundly healed, and returned during the service of Dr. T. T. Sabine. Dr. Sabine applied Szymanowski's operation to the perinæum, and succeeded in closing the opening. I saw Dr. Sabine's operation performed, and determined to make use of the method in a similar case.

Case I.—My first case was that of Thomas Hills, twenty-eight years old, who was admitted to St. Luke's Hospital on

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* Read before the New York Surgical Society, October 11, 1886.

June 19, 1876. He had a large old perineal fistula. The operation was done on July 28th, and will be presently described. At that time I believed that the only method of completely preventing the passage of urine over the seat of operation was the introduction of a cannula or catheter into the bladder *per rectum*, and maintaining the same *in situ* for some days after the operation. This method I have since found to be entirely unnecessary. In the case of Hills the catheter was introduced, but at the end of a few hours became clogged and caused such intense irritation that it had to be withdrawn, and, the bladder soon after emptying itself violently by the urethra, a large amount of urine was forced through the wound. This accident, and probably also my lack of experience in the details of the operation, brought about a complete failure. This patient left the hospital before I had another opportunity to operate upon him.

Five other cases have come under my care since that time, these six being all the cases of urethro-perineal fistula in which I have operated from June, 1876, to the present time.

Case II.—John Jurgens, thirty-six years old, a German, was admitted to St. Luke's Hospital, February 2, 1882. Perineal cystotomy had been performed upon him in another hospital in August, 1881. For the closure of his large perineal opening I operated by Szymanowski's method on August 25th. On September 2d an involuntary evacuation of the bladder forced a few drops of urine between the flaps. The same accident happened two or three times afterward, and the wound was not pronounced to be soundly healed throughout till the end of November. He was then well, and a French sound No. 29 passed easily into the bladder.

Case III.—M. H. Gallagher, twenty-eight years old, an American, was admitted to St. Luke's Hospital, April 26, 1884. He gave a history of perineal abscess and fistulæ of six months' standing. For the relief of stricture, external urethrotomy was done upon this patient by Dr. Little on May 1st. The perineal wound refused to close, although treated by numerous non-operative methods. The urethra admitted a No. 32 French sound readily. On July 18th I did Szymanowski's operation, and on August 4th, seventeen days afterward, the parts were completely healed.

Case IV.—William Purtle, thirty-nine years old, an Irishman, was admitted to Bellevue Hospital on September 17, 1884. Six days prior to admission the patient fell astride a beam and ruptured the urethra. Infiltration of urine and abscess followed. Perineal section was performed on the day of admission. The wound did not completely close, and the patient came under my care in October. On November 6th, anterior strictures were divided until No. 32 could be readily passed. Various non-operative methods were adopted to induce closure of the fistula without success, so that, on December 18th, I did Szymanowski's operation. Thirteen days after the operation the wound was completely healed.

Case V.—John Gifford, forty-seven years old, an American, was admitted to Bellevue Hospital on January 8, 1885. On admission he had extensive infiltration of urine due to stricture. Perineal section was done at once, several other incisions being required. At a subsequent period, March 4th, all strictures were divided by internal urethrotomy until a No. 32 French sound could be easily passed. In spite of every care, the perineal wound refused to close, and I operated for that reason on May 18th.

June 6th, nineteen days after the operation, the wound was firmly healed.

Case VI.—J. R. Horne, forty-five years old, an Englishman, was admitted to St. Luke's Hospital on November 5, 1885. This patient had had external urethrotomy performed upon him for the relief of stricture in 1877. A perineal abscess formed in 1884. His fistula reopened in June, 1885, and did not again close. External and internal urethrotomy were performed upon him in November, 1885, and in January, 1886, a Szymanowski's operation was done for the closure of the perineal opening. This operation did not succeed, probably on account of cystitis due to a calculus which I detected when the patient came under my care in February last. This calculus I crushed and removed through the perineal opening. The cystitis being much reduced and the caliber of the urethra having been restored to No. 32 French, I did Szymanowski's operation on June 5th. No accident happened, and on July 9th, thirty-four days later, the wound was soundly healed.

One case, the first, owing to imperfect management, failed completely. Five cases succeeded, and in none of them was any second operation required.

The second case required three months and six days to obtain sound healing; the third, seventeen days; the fourth, thirteen days; the fifth, nineteen days; and the sixth, thirty-four days. No symptom of the slightest importance occurred in any of the last five cases, and the length of time occupied in recovery certainly compares very favorably with that often spent in futile and even successful attempts to close perineal fistula without operation.

The plan adopted in all of these cases was as follows; and, if the description seems tedious, my excuse must be that I believe the success of the operation to depend largely upon a close attention to details:

Some time previous to operation the entire urethra was cleared of all evidence of stricture, and the urethra accustomed to the passage of sounds; any sinuses in the neighborhood of the fistula were opened and soundly healed. If cystitis existed, it was removed as far as possible, although a moderate amount of chronic cystitis certainly does not contra-indicate the operation.

The day before operation the bowels and rectum were thoroughly cleared in order, especially, that for several days afterward the rectum and adjacent parts might be kept perfectly quiet by a free use of opium. The perinæum was then shaved and carefully cleansed, and the bladder emptied with the catheter and thoroughly washed out with a weak solution of either borax or carbolic acid. The edges of the fistula were then either scraped or cut so as to remove all suppurating granulations which would naturally increase discharge and prevent early union.

A single straight incision was then made, from A, three quarters of an inch in front of, to B, three quarters of an inch behind, the fistula (Fig. 1). This incision passed through skin and superficial fascia, and closely skirted the right side of the fistula. The edge of this incision was raised, and, working with a small blade to the patient's right side, the skin and fascia were undermined until a pocket was formed including the area A C B F, the right edge of the pocket being indicated by the dotted line A C B.

On the opposite side, a curved incision A D B was then made, the greatest width of the flap thus marked out being three quarters of an inch to one inch.

This flap must be generous and should include a good padding of fascia, as, when it is lifted, the shrinkage is great.

Before lifting the flap a thin layer of skin was removed from its surface. This is best done with small curved scissors, the superficial layer of skin being rapidly chipped off.

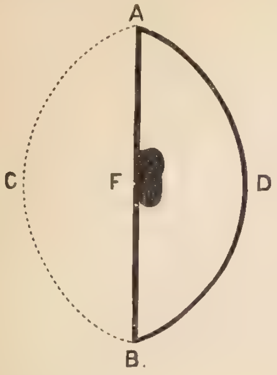

Fig. 1.

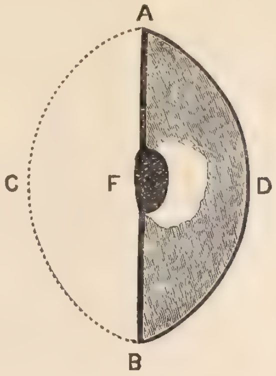

Fig. 2.

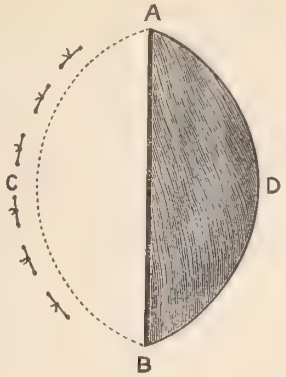

Fig. 3.

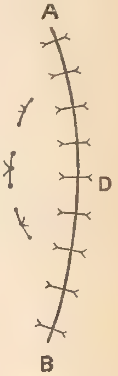

Fig. 4.

The freshening process was carefully extended over the entire area A D B F, excepting over a surface a little larger than the fistula, and immediately next to it.

It was thought best to leave this portion undenuded for the immediate cover to the fistula, because less cicatricial repair would occur, and less pus would be formed than if a raw surface were presented to the urethra (see Fig. 2). The flap A D B was then dissected up close to the median line, and inverted, its attached edge acting as a hinge and as a medium for blood-supply.

Five or six fine catgut sutures were passed through the skin at different points a little beyond the dotted line, A C B, into the pocket, then through the free edge of the flap, and then back into the pocket and out through the skin. Five or six loops were thus formed, by drawing upon which the flap was closely drawn down to the bottom of the pocket, and the free ends of the loops were tied.* (See Fig. 3.) Two or three sutures of catgut were now passed with a curved needle through the upper surface of the inverted flap so as to firmly bind it to the parts beneath. Sometimes with interrupted and sometimes with a continuous catgut suture the free edge, A F B, was now securely fastened to the edge, A D B.† (See Fig. 4.) Irrigation with carbolic acid or bichloride solution was used throughout, excepting in the first case.

The dressing consisted of iodoform, iodoform gauze, and a cotton pad, held in place with a T-bandage. A morphine suppository was usually introduced before the dressing.

The subsequent treatment consisted in a free use of opium to prevent the rectum from acting, and the use of the soft catheter, the latter at least every six hours and as much oftener as was required. Sometimes the catheter would be required as frequently as every three hours, and sometimes it caused moderate urethritis.

The catheter was always, excepting in the first case, thus used: It was introduced and the water drawn off. The bladder was then gently washed out with a weak solution of either carbolic acid or borax; I prefer the latter. On withdrawing the instrument, the end was tightly pinched until the whole catheter had been removed from the urethra. This plan seemed to reduce the chance of contaminating the wound with urine from the inside to a minimum, and is certainly much to be preferred to the practice recommended by Szymanowski of tying in a catheter, or that made use of by me in my first case of puncturing the bladder through the rectum.

THE PHYSICS AND PHYSIOLOGICAL ACTION OF PNEUMATIC DIFFERENTIATION.*

By ISAAC HULL PLATT, M. D.,
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Pneumatic differentiation is the process by which the air surrounding the body and that entering the lungs are rendered of different pressures.

It may be considered under three forms, which, for the sake of convenience of reference, we will designate as positive, negative, and alternate differentiation. The first or positive differentiation is where the air entering the lungs is maintained during both respiratory acts at a greater pressure than that surrounding the body. Negative differentiation is the reverse of this, the air surrounding the body being maintained during both respiratory acts at a greater pressure than that entering the lungs, alternate differentiation being the process by which the two other forms are alternated during respiration; in inspiration the air entering the lungs being of the greater pressure, during expiration that surrounding the body being greater.

The apparatus introduced to the profession by Dr. Williams, and known as the pneumatic cabinet, is the only one, so far as I am informed, which enables us readily to apply to a patient any one of these three forms of treatment, and, as the clinical results reported by Dr. Williams and others are sufficiently encouraging to merit attention, it has seemed to me desirable that thought should be given to the subject of the physiological action of these forms of pneumatic treatment.

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* In the first two cases silk was used, and, I think, interfered with healing.

† The line of suture was thus removed to a distance from the fistula, *large* raw surfaces were brought in contact, and two thick layers covered the fistula.

* Read before the American Climatological Association at its third annual meeting.

As the difference in pressure used is very slight, seldom exceeding that indicated by one inch of the mercury column, less than the fluctuation of the barometer from day to day, it is manifest that the actual pressure can be but an insignificant factor in the result, hence is of no importance whether the differentiation is accomplished by changing the pressure of the air breathed, or of that surrounding the body; the important fact being that they are rendered different. This will be referred to again farther on. The pneumatic cabinet acts by changing the pressure of the air about the body, the pressure of the respired air being that of the surrounding atmosphere.

The primary effects of the differential process will undoubtedly be expended upon the organs and functions of respiration and upon the circulation. Let us first consider the effect of what we have agreed to call positive differentiation upon respiration. In normal respiration, owing to the elasticity of the lungs and of the chest-walls, expiration is a passive act—that is, if no force is voluntarily exerted upon the chest-walls, the thorax will assume the position of expiration. In other words, the passive position of the thorax is that of expiration. Inspiration implies an active exertion, and must be accomplished against a certain amount of resistance, one element of which is the pressure of the atmosphere upon the outside of the body. It is obvious, therefore, that, as a portion of this pressure is removed, the passive position of the thorax will approach nearer to that of inspiration. In normal respiration the amount of force exerted by the elasticity of the lungs in full inspiration, according to Foster, is equal to the pressure measured by 30 mm. of mercury. A rarefaction of this amount, then, will just balance the elasticity of the lungs, and allow the thorax to take such a position as the elasticity of the thoracic walls will determine. The effect of a comparative increase of the intra-thoracic pressure will be to distend the air-passages and alveoli of the lungs. If, then, an effort of inspiration is made, the distension of the lungs will exceed that which can be accomplished by the same effort without the aid of the differential pressure, and the expiratory effort will be obstructed to the same degree as the inspiratory effort is aided, consequently the stationary and residual air will be increased. In other words, the subject of the differential pressure will be suffering temporarily from a condition analogous to that of emphysema. This is opposed to what has heretofore been written, all the papers which I have seen upon the subject taking the ground that the residual air is diminished; but this is plainly impossible, as no more than the usual force can be brought to bear in expiration, while more than the usual resistance has to be overcome. This result can be easily confirmed by experiment. A number of persons were subjected to the differential pressure of half an inch, and it was found that the chest girth was, on an average, three eighths of an inch greater upon forced expiration than under normal circumstances. As the residual air is determined by the capacity of the chest in forced expiration, it is evident that, unless the diaphragm rides higher during the differential pressure, the residual air must be augmented. During expiration the diaphragm is a relaxed muscle or a passive membrane, acted upon solely by the pressure above and below it, but, by the conditions of our experiment, the pressure upon its lower surface is less than normal, while that upon its upper surface remains the same; hence it will ride lower than under normal circumstances, and, so far from acting to offset the tendency to greater capacity of the chest caused by the greater chest girth during expiration, it will act to still further augment it, and still further increase the amount of residual air.

A further and, if possible, still more conclusive demonstration of the proposition is the following: A person is subjected to the positive differential pressure of half an inch, and is required to expire as forcibly as possible. The pressure is removed and he is requested to continue the effort of expiration. An additional amount of air is driven from the lungs, which may be conveyed, by means of a rubber tube, to a bell jar inverted over water and measured, and it is found to be equal to about forty cubic inches. This is the amount which the residual air is augmented by the positive differential pressure of half an inch.

The effect of this process upon the respiratory function, therefore, is that all parts of the lungs will be more fully distended, but less than the usual amount of contraction will be allowed, and the increased effort of expiration affords exercise to the muscles of expiration. Excessive or long-continued pressure will undoubtedly tend to cause permanent emphysema.

The effect of negative differentiation will be, in a great measure, the reverse of this. The passive position of the thorax will become one of expiration to a greater degree than is normal; the natural tendency of the lungs to contract by their own elasticity will be aided by the comparatively increased pressure upon the thoracic walls; expiration will be to a greater degree than normal a passive act; and, when aided by a forced respiratory effort, will be more fully accomplished than is possible under ordinary circumstances; hence the amount of the stationary and residual air will be reduced. Inspiration will be rendered more difficult, and can not be carried to the same extent as under normal conditions; the lungs will be contracted and the muscles of inspiration strengthened by exercise.

The effect of alternate differentiation will be a combination of the effects of the two former. Both respiratory acts will be aided or rendered passive, the residual air will be reduced to a minimum, the alveoli contracted to as great an extent as possible during expiration, and fully expanded during inspiration. The lungs will thus be more fully ventilated.

Let us now turn to the consideration of the effects upon the circulation. The cavity of the thorax may be considered as being made up of two parts—one, the alveoli and air-passages communicating freely with the external atmosphere, the other consisting of the heart and intra-thoracic vessels communicating with the general vascular system of the body. The inner surfaces of both these cavities are normally under the same atmospheric pressure, the air space directly, the blood-space indirectly through the blood, which, filling the vessels of the body outside the thorax, is subjected, with the body at large, to the general atmospheric pressure. When the inspiratory effort is made, the cavity of the thorax being enlarged by the action of the diaphragm and other muscles of inspiration, not only does the air enter by reason of the atmospheric pressure, but the blood, urged onward by the same atmospheric pressure, acting upon the outside of the body, is driven into the blood-space of the thorax from the general venous system to a degree varying with the depth of inspiration, and with a force which, in a healthy man in full inspiration, is estimated as equal to that necessary to raise a column of mercury 30 mm. Even in ordinary expiration, owing to the elasticity of the lungs and their consequent tendency to contract away from the thoracic walls, the pressure upon the extra-thoracic portion of the vascular system is greater than upon the intra-thoracic by about the amount necessary to raise a column of mercury 5 mm. This is what is known as the thoracic aspiration of the blood. Now let us examine what effect the use of the cabinet will have upon this, supposing, in the first place, the pressure about the body to be diminished. It is obvious that, if the entire atmospheric pressure were to be removed from the periphery of the body, the intra-pulmonary pressure remaining normal, all the blood in the body would be drawn out of the thorax, or, more properly speaking, would be driven out by the intra-thoracic atmospheric pressure into the extra-thoracic vessels, and the circulation of the blood would cease. Any diminution of the peripheral pressure, the intra-pulmonary pressure remaining the same, would institute a tendency in this direction—that is, a tendency to reduce the blood-flow from the extra-thoracic portion of the vascular system into the thorax, and to increase the blood-flow from the thorax into the extra-thoracic portion of the vascular system, thus reducing the amount of blood in the thorax. To put the same proposition in another form. The walls of the intra-thoracic portion of the vascular system are pressed upon centripetally by the direct pressure of the atmosphere. They are pressed upon centrifugally by the indirect atmospheric pressure transmitted by the blood from the periphery of the body. If the pressure upon the periphery of the body is reduced, the transmitted pressure, acting centrifugally upon the walls of the intra-thoracic vessels, will be reduced, but, the direct centripetal pressure remaining the same, they will be reduced in caliber, and the tendency will be to drive the blood out of the thorax, as we have already seen. An additional tendency in the same direction is due to the fact that, in the fuller inspirations accomplished by the use of the cabinet in the manner described, the small vessels of the lung will be more than usually stretched in the direction of their length, thus reducing their caliber and affording more than usual obstruction to the flow of blood through them. The tendency, however, to dam back the blood upon the right heart will be to a great degree obviated by the fact that the damming-back process will commence before the blood reaches the right heart—to wit, in the vena cava and its intra-thoracic branches, where, owing to the greater thinness of their walls, the pressure will be more effectual than in the thick-walled pulmonary arteries.

It remains to be considered what the effect will be upon the arterial blood pressure in the general circulation. The pressure upon the periphery of the body being reduced, as we have seen, less blood will flow into the thorax by the vena cava; consequently less will be delivered to the right heart. The pulmonary vessels being reduced in caliber, both by the comparatively increased centripetal pressure and during inspiration by the longitudinal stretching, still further obstruction will be encountered in the flow of blood to the left heart; and, less blood being delivered to the left ventricle, less can be delivered by it into the aorta. The walls of the veins and capillaries being less rigid than those of the arteries, will feel to a greater extent the effect of the diminished pressure; hence the blood, in passing from the arterial to the venous side of the circulation, will meet with less than the usual amount of resistance. Of the three factors, then, which go to determine the arterial tension, two—namely, the amount of blood delivered by the heart to the arteries, and the amount of resistance offered in the capillaries—will be diminished. The tendency will also be to diminish the third factor, the caliber of the arteries themselves increasing by reason of the reduction of the direct pressure upon them. Unless by some means the vaso-motor system is called into play to offset this tendency, it is evident that the arterial tension will be diminished. The blood, then, passing readily through the arteries and capillaries of the general circulation, will tend to accumulate upon the venous side, from which its flow will be retarded by the increased pressure to which it is subjected as it enters the thorax. The tendency, therefore, of positive differentiation will be toward the exsanguination of the lungs, and consequent relief of local plethora and congestion when they exist, and the lowering of the arterial pressure of the general circulation. Repeated experiments have shown the arterial tension to be reduced, as judged both by the finger upon the pulse and by the sphygmograph. In the case of one gentleman in fairly good health, but who suffers occasionally from slight functional disturbance of the heart, the pulse became intermittent under the differential pressure of half an inch, owing, as I suppose, to the reduced amount of blood delivered to the left ventricle.

It is sufficiently obvious that negative differentiation will have the opposite effect. The atmospheric pressure upon the periphery of the body urging the blood onward, not being counterbalanced by as great an atmospheric pressure within the thorax, will tend to an increased flow toward the thorax, and the increased pressure to which it is subjected as it passes from the thorax into the remaining parts of the body will tend to retard its passage thence; the lungs will, therefore, be subjected to a local plethora, and the tendency will be to congestions and hæmorrhages. The arterial tension in the general circulation will be raised, because, more blood being delivered to the left ventricle, more will be sent by it through the aorta into the general circulation, where a further tendency, acting to raise the arterial tension, will be encountered in the increased pressure to which the capillaries and veins are subjected.

During ordinary respiration, an aspiratory force is alternately exerted and suspended by the movements of inspiration and expiration respectively. Under the influence of alternate differentiation, during inspiration the peripheral air-pressure is diminished; hence the tendency of the blood toward the thorax is diminished; during expiration, on the other hand, the peripheral air-pressure is increased; therefore the tendency of the blood from the thorax is checked. Thus we see the effect of alternate differentiation will be to partially obliterate the undulations in the blood-pressure which normally exist consequent upon thoracic aspiration.

(*To be concluded.*)

THE PAINLESS PRODUCTION OF LOCAL ANÆSTHESIA,

AND ITS APPLICABILITY IN THE TREATMENT OF CERTAIN PAINFUL NERVOUS AFFECTIONS.

A NEW METHOD.

By J. LEONARD CORNING, M. D., New York,

CONSULTANT IN NERVOUS DISEASES TO ST. FRANCIS HOSPITAL, JERSEY CITY, ETC.

The desire to produce a condition of local anæsthesia in a part, which has been rife among surgeons for many years, has finally been realized, as the copious literature of the last fifteen months abundantly demonstrates. With an eye to the evident applicability of local anæsthesia in the treatment of a variety of painful nervous conditions, the author of this paper has conducted and published the results of a large number of experiments showing the applicability of the principles of local anæsthesia to the fine ramifications of the sensory nerves in the integument, to the large nerve-trunks, and finally to the sensory tracts of the spinal cord itself. The practically universal expression of approval which these contributions have evoked from the profession in this country and abroad has been a source of gratification no less than surprise to the author of this paper. Originally conducted with a view to a strictly neurological application, these researches * have been extensively applied to the useful ends of surgery. All this is gratifying. It is not my intention on the present occasion, however, to recapitulate what has now become a part of medical history; I propose rather to go forward. To come to the point, it is well known that local anæsthesia as heretofore practiced has been unavoidably associated with a certain degree of pain, owing to the necessity of introducing the anæsthetic into and below the skin by means of the hypodermic needle. In order to overcome this difficulty, an attempt has recently been made to introduce the anæsthetic into the skin by means of electricity. Thus, Wagner † moistened the anode with a five-per-cent. solution of cocaine and placed the cathode over an indifferent point, regarding the position of the latter as immaterial. After applying the galvanic current for four or five minutes, he affirms that he was able to produce anæsthesia on the flexor side of the upper arm. Similar experiments have also been conducted by others. As for myself, I have carefully repeated these experiments, but have been unable to obtain more than a superficial anæsthesia. Now, it is a well-known fact that if a membrane is placed between the poles of a battery, as above described, it is possible to cause a fluid to penetrate the same (from the anode to the cathode) by the action of the current. This is one of the well-known axioms of electrophysics. But to conclude from this that it is possible, without the introduction of some favorable circumstance, to induce a fluid to penetrate in this manner a structure (the skin) a hundred-fold more dense than the ordinary membrane found in the physical laboratory, seems, to say the least, highly improbable. These considerations, coupled with my own failure to reproduce phenomena of the same intensity as those described by Wagner, aroused in me the conviction that success was alone to be found in some

Method of increasing the Porosity of the Skin.—After much reflection, I bethought myself of the following method: I procured an implement resembling the well-known instrument of Baunscheidt, but provided with many more fine needles than the conventional instrument of the shops (Fig. 1). As in the Baunscheidt arrangement, this instrument is so constructed that by releasing a spring it is possible to thrust all the needles (about one hundred and fifty in number) into or through the integument, and, what is of para-

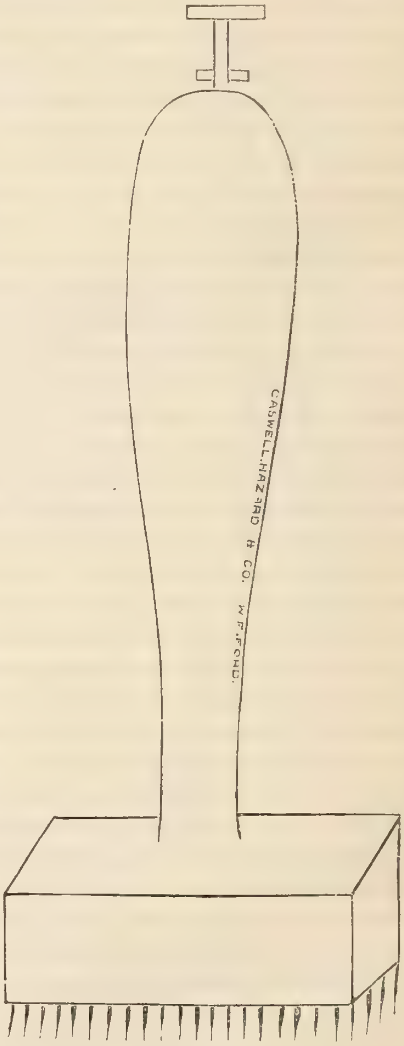

Fig. 1.

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* "On the Prolongation of the Anæsthetic Effects of the Hydrochlorate of Cocaine when subcutaneously injected: an Experimental Study," by J. Leonard Corning, "New York Medical Journal," September 19, 1885. "Prolonged Local Anæsthetization by Incarceration," *ibid.*, January 2, 1886. "Spinal Anæsthesia and Local Medication of the Cord," *ibid.*, October 31, 1885. "Local Anæsthesia," New York, D. Appleton & Co., 1886.

† "Wien. med. Blätter," No. 6, 1886.

mount importance, *such perforation* is accomplished absolutely without pain. Now as to the method:

1. I first exsanguinate the part to be anæsthetized with an Esmarch bandage. I now apply a tourniquet above the bandage, and the latter is then removed. It is clear, therefore, that the whole district situated below the tourniquet, and which includes the territory which it is desired shall be rendered anæsthetic, is bloodless. Now, by means of the implement above described, I perforate the skin thoroughly throughout the entire zone which I desire to render anæsthetic. *This is accomplished without the slightest pain,* as already intimated. Owing to the exsanguinated condition of the part, these minute openings remain open somewhat as in a dead person. This sieve-like appearance of the skin as seen through a powerful lens is well shown in Fig. 2. An oblong sponge electrode saturated with a two-and-a-half-per-cent. solution is now secured over the perforated portion of the integument by means of an elastic strap. This electrode is connected with the positive pole of a galvanic battery, while the cathode is placed opposite the same (on the other side of the limb) or over some indifferent point. If, now, the plates of the battery are immersed and the current is gradually increased until there is a slight but well-marked sensation of warmth, the anæsthetic begins to exert its influence at once, so that in the course of from two to four minutes there is produced a condition of anæsthesia which enables one to thrust needles into the part to considerable depths without provoking pain. It is evident that where such a condition of things prevails in the integument the structures lying beneath may be readily anæsthetized, if one so desires, to any extent and *without pain,* by the use of the hypodermic syringe, or by thrusting the needles a second time, still deeper.

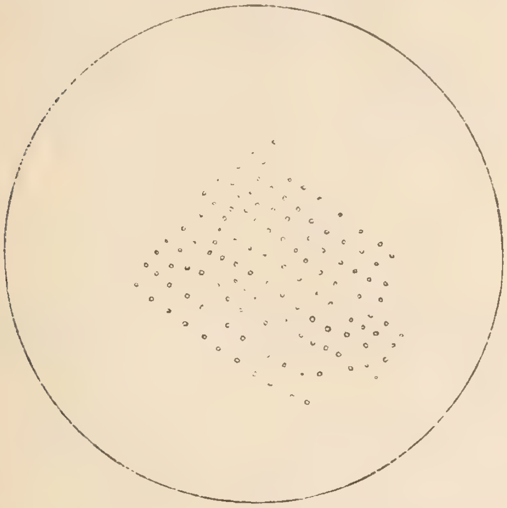

Fig. 2.

I have employed this method recently to allay the hyperæsthesia which is such a troublesome feature of spinal irritation. I fancy, too, that it might render good service in certain obstinate conditions of tic douloureux, and I shall certainly try it in this and similar painful affections at the earliest convenient occasion.

Any one at all conversant with recent developments in neuro-therapeutics will perceive that this method offers possibilities of practical advancement.

2. I would add that I have induced painless perforation and anæsthetization by means of the galvanism without previous exsanguination, and have found the results in all respects gratifying.

3. A third mode of inducing cutaneous anæsthesia by means of the electric current combined with painless multiple puncture of the skin and the use of cocaine, which I have found very successful, is as follows: (*a*) Perforate the skin, or at least the epidermis, with the instrument already described. (*b*) Place a bandage around the part, above the point of puncture, and draw the same sufficiently tight to interrupt the venous circulation, but not to such an extent as to interfere with the arterial circulation. This procedure will cause the blood to well up through the minute openings previously made in the skin. Now apply the positive electrode, saturated with a two- or three-per-cent. solution of cocaine, over the perforated portion of the skin. The position of the cathode is immaterial. As before mentioned, the current should be strong enough to produce a feeling of warmth. After from two to five minutes the electrodes may be removed, and the skin beneath the positive electrode will be found to be completely anæsthetic. Where it is desirable to prolong the duration of the anæsthesia considerably, the part may now be exsanguinated and the tourniquet applied above the anæsthetic zone, so as to completely interrupt the circulation in veins and arteries alike.

The superiority of this method consists, of course, in its absolute painlessness; whether it will find a place in surgical operations or not remains for those who are interested in such matters to decide.

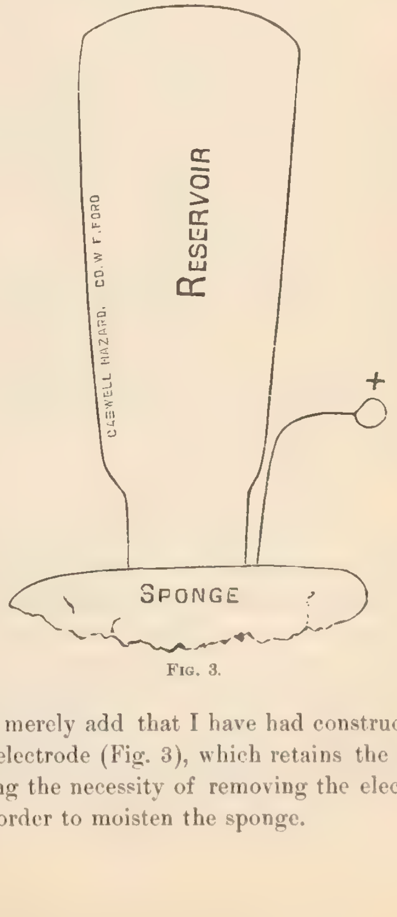

Fig. 3.

I would merely add that I have had constructed for me a reservoir electrode (Fig. 3), which retains the anæsthetic, thus avoiding the necessity of removing the electrode from the part in order to moisten the sponge.

THE
NEW YORK MEDICAL JOURNAL,
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Edited by Frank P. Foster, M. D.

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PHOTOGRAPHING THE LARYNX.

In the application of instantaneous photography to the study of certain organs during their full activity, physiology has lately received a most important acquisition. Not only are the parts themselves exactly reproduced, but, what is of still greater moment, movements too rapid and complicated to be appreciated by the eye are analyzed, and the succession of changes which they involve is accurately caught and retained. Thus, as in many other fields in which the instantaneous process has been used, results both interesting and valuable may naturally be expected, and in no direction with greater confidence than in the investigation of the physiology of the production of the human voice.

The idea of applying the art of photography to the larynx is by no means new; indeed, it originated with Czermak, the father of laryngology. Since his day, several persons have attempted it, but with signal lack of success. In 1882, however, Dr. Thomas R. French, aided by Mr. George B. Brainerd, both of Brooklyn, produced some excellent photographs of the larynx, which were shown by Dr. French before the American Laryngological Association; and, two years later, at the International Medical Congress at Copenhagen, Dr. French presented photographs, together with a special instantaneous camera and other apparatus devised by him, which for originality, simplicity, and efficiency left nothing to be desired. All the difficulties formerly encountered had been met and overcome. Any larynx that could be demonstrated with the laryngeal mirror at all could be photographed, the process was instantaneous, it was carried out by means of sunlight, it was not difficult, and only the image in the laryngeal mirror was taken. Both physiological and pathological conditions could be represented, and the photographs could be themselves enlarged, thrown on a screen and magnified to any desired extent for class-room demonstration, or transferred to a block for wood engraving, or reproduced by other processes. These facts promised advantages that were numerous and varied.

While Dr. French's paper was received with well-merited applause, there were not wanting certain hypercritical hearers who failed to appreciate its importance, and quite recently even so distinguished an authority as Dr. Morell Mackenzie has said: "It is questionable, however, whether the practical outcome of such persevering efforts is at all commensurate with the time and trouble which they must have cost. My own feeling in looking at these photographs is more one of admiration at the ingenuity and resource displayed in overcoming a great difficulty than of edification at the actual results. No obscure point in the mechanism of the voice has been elucidated by the camera, while for purposes of instruction the views of the larynx obtained thereby are less valuable, because less clear, than ordinary drawings." To one familiar with the subject this criticism seems singularly lacking in foresight and good judgment. A simple comparison of ordinary drawings with photographic views of the larynx, suitably presented for purposes of instruction, will demonstrate the great value of the latter. As to the objection that "no obscure point in the mechanism of the voice has been elucidated by the camera," no comment could be stronger than the article by Dr. French given in this number of the Journal.

It argues well for the future of the invention that the gentleman through whose genius it was devised is also possessed of unusual quickness and sagacity as an observer and, perhaps most important of all, of a thorough knowledge of the principles of music and of a remarkably fine and accurate perception of tone. In his hands much has already been accomplished, and it is safe to say that the investigations so brilliantly begun will result in the settlement of the many important questions with regard to voice production which have for years been the occasion of such active and such heated controversy.

THE COLUMBUS MEDICAL COLLEGE.

The wisdom of charging State boards of health with the administration of laws governing the practice of medicine is open to serious question. Still more doubtful is the expediency of clothing such boards with the authority to pronounce upon the status of educational institutions. In the first place, such a board is sure to have its hands full enough in carrying out its legitimate work, and its energy ought not to be diverted into distracting channels. Moreover, while it may freely be conceded that such boards as have been endowed with this power have used it discreetly in the main, the occasions on which at least temporary injustice has been done are getting to be numerous enough to show the imminent danger of grievous and enduring wrong being done to individuals and to colleges. We lately alluded to an instance in which a State board of health acted in a manner to cast a stigma upon the standing of the Jefferson Medical College, of Philadelphia. In that case the college was so well known and its fame was deservedly so high that it did not suffer in the least, but it is not every college, however meritorious it may be, that can hold its own against an official slur.

This has been exemplified in the case of the Columbus Medical College, of Ohio, which for four years has labored bravely and patiently under the imputation of having forfeited its standing with the West Virginia board in consequence of conferring the degree on a gentleman in whose qualifications there was a technical flaw. We have taken pains to ascertain the facts in this case, and we believe them to be as follows: When the gentleman came up for graduation, he produced trustworthy certificates as to his moral character. He showed that he had practiced for eight consecutive years in West Virginia; that he had been a member of the State Medical Society, and one of its essayists; that he had been a delegate to the American Medical Association; that he had been a member of the board of trustees of the State Lunatic Asylum; and that he had stood well both with the profession and with the laity of his State. Tickets in his possession indicated that he had attended a full course of lectures at the Starling Medical College, and that he had dissected three entire subjects. At the examination he passed above the average, and he wrote a good thesis and defended it ably. In the judgment of the faculty, he was clearly competent to practice medicine anywhere.

In view of these facts, the faculty thought itself justified in granting him the degree, waiving the technical requirement of the completion of the candidate's second course. It may be that in this matter the faculty committed an error of judgment; undoubtedly it violated one of its own rules. But that the considerations which led it to do so were weighty must, we think, be admitted. This violation of a technicality was the tangible fact laid hold of by the West Virginia board, and it does not appear that the palliating circumstances were made known to it. We do not question the board's sincerity in the matter, or that it was actuated by commendable motives. We consider, however, that it acted on insufficient information, and this view seems to be supported by the fact that both the Illinois and the Minnesota boards, having had the same matter brought before them, and having invited the faculty to appear before them, made a minute examination of the documentary evidence, and completely and unequivocally exonerated the college.

We are glad to learn that recently the secretary of the West Virginia board notified the dean of the college that its diplomas would now be registered in West Virginia on the same footing as those issued by other reputable medical colleges. Now, therefore, the Columbus Medical College is recognized in every State. We congratulate the institution on this happy result of its struggle, and we look to see it do as excellent work in the future as it has done in the past. We congratulate it also on a recent notable addition to its resources, in the shape of a new hospital which has been opened within the past few months.

MINOR PARAGRAPHS.

MRS. WOERISHOFFER'S GIFT TO THE NEW YORK ACADEMY OF MEDICINE.

We lately recorded the gift of twenty-five thousand dollars to the Academy. We are now at liberty to mention that this substantial addition to its resources came from Mrs. Woerishoffer, who, in a communication to Dr. Jacobi, the president of the Academy, stated that she had been guided in the matter by the great respect that her late husband, Mr. Charles F. Woerishoffer, had always felt and expressed for medical science and the medical profession, and by her own conviction that it was better to aid scientific and charitable institutions that had already proved their right to exist, and shown evidence of their permanence, than to create new ones. She had concluded that, by the publication of its proceedings in the medical journals and in its volumes of "Transactions" and "Bulletins," the Academy of Medicine had shown its title to be considered a scientific body; that, having existed for forty years, having possessed itself of a large and growing library, and having accumulated considerable property, it held out the promise of perpetuity; that, by excluding political and ethical strife, it deserved the name of a purely and exclusively scientific body, and therefore the confidence of the public; and that it must necessarily become and continue the center of the scientific interests and labors of the medical profession of New York.

Mrs. Woerishoffer remarked that she had also been struck with the fact that the Academy's present building was too small for its purposes, actual and prospective; that not only did its sections require more accommodations, but every medical and scientific body in the city ought to find ample room within its walls, and look upon the Academy as its proper center; and, finally, that the increasing library was in urgent need of a fire-proof building.

THE NEW YORK NEUROLOGICAL SOCIETY.

The society's meeting on Tuesday evening of this week was so well attended that the Academy of Medicine's large hall was required to accommodate those present, instead of the parlor ordinarily used. The proceedings were marked by some very pointed and, we think, timely statements by Dr. Hammond in regard to the alleged cocaine habit. Dr. Hammond admitted that there were instances of addiction to the drug, but he likened such addiction to the habit of taking tea, coffee, or the like, and utterly denied any such enslaving appetite for cocaine as so often occurs in the case of opium. He was inclined also to attach very little importance to the statements that have been freely made as to the direful effects of the habitual use of cocaine. He mentioned that he himself had taken eighteen grains hypodermically within the space of a few minutes, and with no very uncomfortable results. Some of the gentlemen present considered Dr. Hammond's personal experience exceptional, and questioned the view he took of the cocaine habit, but the instances adduced by them turned out to have occurred in persons whose strength of will had previously been shattered by the opium habit, so that the general impression was that they had little if any direct bearing on the question.

On the same occasion Dr. George W. Jacoby presented a case of Thomsen's disease, said to be the first unquestionably typical case of this curious disorder ever observed in this country.

THE COMPARATIVE PROSPECTS OF DOCTORS AND LAWYERS.

The struggles of young doctors are hard enough, as few if any of our readers need be reminded. To those who are inclined to regard their own prospects as gloomier than if they had chosen some other profession we commend an advertisement that lately appeared in the "Daily Register," the New York law journal, in which "an experienced attorney" offered his services to any law firm at a salary of five dollars a week.

A RAMBLING DISCUSSION.

We have before spoken of the frequency with which irrelevant matters are brought up in society discussions. A remarkable instance occurred lately at a meeting of one of our city societies. A member presented specimens from a case of poisoning with corrosive sublimate. The individual had taken twenty-five grains in solution, with suicidal intent. The lesion produced in the kidneys was just what might be expected from such an overwhelming dose of a corrosive metallic poison, and affected the epithelial cells lining the uriniferous tubules. Another member proceeded to give an interesting account of the therapeutical use of corrosive chloride of mercury in Bright's disease, which was as nearly related to the effects caused by the ingestion of twenty-five grains at a single dose as the Czar is to the locomotive that pitched the bull over the fence. But it was the night before the dedication of the Bartholdi statue, and it was rainy; perhaps these circumstances had an intimate relation to each other.

ITEMS, ETC.

Infectious Diseases in New York.—We are indebted to the Sanitary Bureau of the Fourth Division of the Health Department for the following statement of cases and deaths reported during the two weeks ending November 2, 1886:

DISEASES.	Week ending Oct. 26.		Week ending Nov. 2.	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever	30	10	41	11
Scarlet fever	31	3	21	4
Cerebro-spinal meningitis	1	1	2	2
Measles	103	8	183	20
Diphtheria	99	45	70	42

The Health of the State of New York.—By the State board of health's "Monthly Bulletin" for September it appears that the whole number of deaths reported during that month was 7,239, 44·3 per cent. of which were in children under five years old. In each thousand there were 272·88 from zymotic diseases, 165·40 from diarrhœal diseases, 24·49 from typhoid fever, and 44·78 from croup and diphtheria.

The New York Academy of Medicine.—At the meeting of the Section in Surgery, next Monday evening, the order will be "Reports of Cases, with Discussions."

At the meeting of the Section in Neurology, next Friday evening, a paper on "Injury to the Head followed by Spinal Hemiplegia without Cerebral Disturbance" will be read by Dr. V. P. Gibney, and one on "Sarcoma of Nerve Roots, the Dura Mater of the Spinal Cord, and the Retroperitoneal Glands" by Dr. R. Van Santvoord.

At the meeting of the Section in Ophthalmology and Otology, Monday evening, the 15th inst., Dr. D. B. St. John Roosa will read a paper entitled "Clinical Observations upon Diseases of the Mastoid Process."

At the meeting of the Section in Theory and Practice of Medicine, Tuesday evening, the 16th inst., Dr. A. Jacobi will read a paper on "Follicular Amygdalitis."

Recent Gifts to the Academy of Medicine.—At the same meeting at which Mrs. Woerishoffer's gift of twenty-five thousand dollars was announced, the secretary of the board of trustees stated that the sum of five thousand dollars, bequeathed to the Academy by the late Dr. Beadle, had been received. Apropos of Mrs. Woerishoffer's gift, the following resolutions were moved by Dr. Fordyce Barker, seconded by Dr. C. R. Agnew, and unanimously adopted:

"*Resolved*, That the New York Academy of Medicine accept with the warmest thanks and gratitude the noble gift of twenty-five thousand dollars from Mrs. Anna Woerishoffer, as an expression of the appreciation by her late husband and herself of the importance of the medical profession to the health and welfare of the public as well as to individuals, and the necessity for the development of its higher culture.

"*Resolved*, That the names of Mr. and Mrs. Woerishoffer be inscribed in the Academy for permanent record as Benefactors.

"*Resolved*, That a copy of these resolutions, duly engrossed, and signed by the president, the recording secretary, and the treasurer, be transmitted to Mrs. Woerishoffer."

At the same meeting Dr. Agnew gave notice of a proposed amendment to the By-Laws, providing for the establishment of a building fund.

The late Dr. McBride's Library.—We would call our readers' attention to the announcement in our advertising columns of the sale of the late Dr. Thomas A. McBride's valuable collection. It is to be hoped that it will be sold entire, and we may add that it would be a graceful act for the purchaser to give it to one of our public medical libraries.

The Massachusetts Medical Society.—A meeting of the Section in Clinical Medicine, Pathology, and Hygiene, of the Suffolk District Branch, will be held in Boston on Wednesday evening, November 10th. The programme includes the following papers: "An Unusual Form of Professional Neurosis," by Dr. Philip C. Knapp; "A Case of Malignant Endocarditis," by Dr. F. C. Shattuck; and "Fatal Perforation of the Appendix Cœci, with Specimen," by Dr. E. W. Cushing. The discussion of Dr. Shattuck's paper will be opened by Dr. R. H. Fitz.

The College of Medicine of the University of Nebraska.—We learn that the "regular" department of this school has twenty students, while the "homœopathic" department has none, the requirements for admission having proved "too much" for the homœopathic candidates.

Army Intelligence.—*Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from October 17, 1886, to October 30, 1886:*

Webster, Warren, Major and Surgeon. Leave of absence on account of sickness further extended one year on account of sickness. S. O. 244, A. G. O., October 20, 1886.

Weisel, Daniel, Captain and Assistant Surgeon. Relieved from duty at Fort Fred Steele, Wyoming, and ordered to proceed to and take station at Fort McKinney, Wyoming, reporting to the Commanding Officer of that post for duty. S. O. 135, Department of the Platte, October 15, 1886.

Taylor, B. D., Captain and Assistant Surgeon. Transferred from Department of the East to Columbus Barracks, Ohio. S. O. 244, A. G. O., October 20, 1886.

Tesson, L. S., Captain and Assistant Surgeon. Transferred from Department of Texas to Department of the East. S. O. 244, A. G. O., October 20, 1886.

Barrows, C. C., First Lieutenant and Assistant Surgeon. Transferred from Department of Arizona to Department of the East. S. O. 244, A. G. O., October 20, 1886.

Egan, P. R., First Lieutenant and Assistant Surgeon. Transferred from Department of Arizona to Department of Texas. S. O. 244, A. G. O., October 20, 1886.

Walker, F. V., First Lieutenant and Assistant Surgeon. Transferred from Department of the East to Department of Texas. S. O. 244, A. G. O., October 20, 1886.

Carter, E. C., First Lieutenant and Assistant Surgeon. Granted leave of absence for six months, with permission to apply for an extension and to go beyond sea, to take effect when his services can be spared. S. O. 244, A. G. O., October 20, 1886.

Edie, Guy L., First Lieutenant and Assistant Surgeon. Having returned from detached service in Department of Arizona, will join his station at Fort McIntosh, Texas. S. O. 144, Department of Texas, October 13, 1886.

Black, Charles S., First Lieutenant and Assistant Surgeon. Granted leave of absence for two months on surgeon's certificate of disability, to take effect when his services can be spared. S. O. 244, A. G. O., October 20, 1886.

Chapin, Alonzo R., First Lieutenant and Assistant Surgeon. Relieved from duty at Fort Laramie, Wyoming, and ordered to Fort Washakie, Wyoming. S. O. 137, Department of the Platte, October 19, 1886.

Ives, Francis J., First Lieutenant and Assistant Surgeon. In obedience to instructions received from the Division Commander, ordered to report in person at Headquarters Department of the Platte, for duty. S. O. 146, Department of Texas, October 16, 1886.

Kendall, William P., First Lieutenant and Assistant Surgeon. Leave of absence extended fifteen days. S. O. 239, A. G. O., October 14, 1886.

Banister, W. B., First Lieutenant and Assistant Surgeon. Assigned to duty at Fort Wingate, New Mexico. F. O. 97, Department of Arizona, September 29, 1886.

Mason, Charles F., First Lieutenant and Assistant Surgeon. Relieved from temporary duty at Fort Verde, Arizona Territory, and ordered for duty at Fort Huachuca, Arizona Territory. S. O. 99, Department of Arizona, October 12, 1886.

Billings, J. S., Major and Surgeon. Granted leave of absence for eight days. S. O. 246, A. G. O., October 22, 1886.

Lauderdale, John V., Captain and Assistant Surgeon. Leave of absence extended one month. S. O. 249, A. G. O., October 26, 1886.

Corson, Joseph K., Captain and Assistant Surgeon. Granted leave of absence for one month, to take effect when his services can be spared. S. O. 246, A. G. O., October 22, 1886.

Moseley, E. B., Captain and Assistant Surgeon. Relieved from duty in Department of the Columbia, and ordered to report in person at Headquarters, Division of the Pacific, for assignment to duty. S. O. 87, Division of the Pacific, October 16, 1886.

Naval Intelligence.—*Official List of Changes in the Medical Corps of the United States Navy for the week ended October 30, 1886.*

Deihl, Oliver, Passed Assistant Surgeon. Granted three months' leave from 26th inst.

Marine-Hospital Service.—*Official List of Changes of Stations and Duties of Medical Officers of the United States Marine-Hospital Service, for the two weeks ended October 23, 1886:*

Urquhart, F. M., Passed Assistant Surgeon. Relieved from duty at Cape Charles Quarantine, to proceed to Washington, D. C., with Steamer Woodworth. October 20, 1886.

Wasdin, Eugene, Passed Assistant Surgeon. Promoted and appointed Passed Assistant Surgeon, from October 1, 1886. October 20, 1886.

Williams, L. L., Assistant Surgeon. Granted leave of absence for three days. October 16, 1886.

Society Meetings for the Coming Week:

Monday, *November 8th:* New York Academy of Medicine (Section in Surgery); New York Surgical Society (in the afternoon); New York Ophthalmological Society (private); New York Medico-historical Society (private); New York Academy of Sciences (Section in Chemistry and Technology); Lenox Medical and Surgical Society (private); Boston Society for Medical Improvement; Gynæcological Society of Boston; Burlington, Vt., Medical and Surgical Club (annual); Norwalk, Conn., Medical Society (private).

Tuesday, *November 9th:* New York Medical Union (private); Medical Society of the County of Rensselaer, N. Y.; Newark (private), and Trenton (private), N. J., Medical Associations; Medical Society of Camden County, N. J. (semi-annual—Camden); Norfolk, Mass., District Medical Society (Hyde Park).

Wednesday, *November 10th:* New York Pathological Society; American Microscopical Society of the City of New York; Medico-legal Society; Medical Society of the Counties of Albany and Cayuga, N. Y.; Pittsfield, Mass., Medical Association (private); Worcester, Mass., District Medical Society (Worcester); Philadelphia County Medical Society (conversational).

Thursday, *November 11th:* Society of Medical Jurisprudence and State Medicine; Brooklyn Pathological Society; New York Physicians' Mutual Aid Association (annual); South Boston, Mass., Medical Club (private); Pathological Society of Philadelphia.

Friday, *November 12th:* New York Academy of Medicine (Section in Laryngology); Yorkville Medical Association (private); Medical Society of the Town of Saugerties, N. Y.

Saturday, *November 13th:* Obstetrical Society of Boston (private).

OBITUARY NOTES.

William Torrey Thurston, M. D., of Barrington, R. I.—Dr. Thurston, an old and respected physician, well known to the medical profession in Rhode Island, died at Nyatt Point, Barrington, R. I., on October 23d. Dr. Thurston was born in the West Indies in 1805, but received his medical education in this country, graduating in New York in 1829. He settled in Portland, Me., and afterward in Westerly, R. I. He served as a surgeon during the late war, and was severely wounded at the battle of Savage Station. In 1876 he was appointed superintendent of the Rhode Island Hospital, in Providence, where he remained until 1882, when the infirmities of age and the deafness caused by his wound compelled him to retire from active employment. Dr. Thurston was universally respected as a physician and as a gentleman of the "old school" of politeness.

Letters to the Editor.

ŒDEMA OF THE PREPUCE.

Elgin, Ill., *October 29, 1886.*

To the Editor of the New York Medical Journal:

Sir: For several years past I have been treating a class of cases in a way so entirely successful, as compared with the methods given in our text-books and those usually taught in medical schools, that I have thought it might be of value to some of your many readers. I refer to the great œdema and infiltration attending many cases of phimosis and paraphimosis as the result of congenital or specific causes. In many cases occurring in the adult we find a perfect horror of being confined to the bed. In fact, unpleasant circumstances connected with the trouble render it imperative that our patient should engage in his usual occupation during the treatment. These requirements have led me to the adoption of the following measures: I saturate a given quantity of absorbent cotton with chemically pure glycerin in which bichloride of mercury has been dissolved in proportions varying from 1 in 1,000 to 1 in 5,000, according to the amount of fœtor present; or, in place of the bichloride, iodoform, carbolic acid, or any antiseptic agent preferred may be used. With the cotton so charged I completely encircle the organ so far as it is involved. Over this I draw a large rubber condom, which is then suspended from an abdominal band. This dressing is to be repeated every six hours until the œdematous condition disappears. At that a beginning pallor will be observed, and often in from twelve to twenty hours the prepuce will have become very pale and shriveled. The great majority of cases yield promptly, and no further progress is observed after the first application. If ulcers are present, it will often be discovered that they have taken on a healthy action before it has been possible to expose them, and not infrequently this progresses until the cure is completed. The advantages of this dressing are: It is cleanly; there is no difficulty in applying it, patients frequently continuing the treatment at their rooms or places of business after the first dressing; it does not expose or confine the patient; and the results, in my hands and in those of others who have tried it at my suggestion, have been very satisfactory.

J. G. Tapper, M. D.

COCAINE IN THE TREATMENT OF WHOOPING-COUGH.

36 West Thirty-second Street, *October 26, 1886.*

To the Editor of the New York Medical Journal:

Sir: In September, 1885, I was called to see a little girl two years of age who was ill with lobular pneumonia complicating pertussis of several weeks' duration. The child was feeble and was continually racked by paroxysms of cough, during which she would become cyanotic and gasp for breath. I had not heard of the use of cocaine in such cases, and I think that at that date nothing on its application in whooping-cough had been published. Ordering a four per-cent. solution, I directed the mother to swab the throat carefully after each paroxysm, the swab to be wrung out before being used. I also prescribed a mixture containing carbonate of ammonium, syrup of ipecac, and syrup of wild cherry. After the first swabbing the child did not cough for half an hour. It was two hours after the second application before she coughed again. Then she expectorated mucus and was quiet for two hours more. She rested well from that time, and ultimately recovered. Hot poultices were used on the chest, as in an uncomplicated case of pneumonia. A sister of this child, a girl of about four years of age, who had whooping-cough and bronchitis, was treated with the cocaine and a stimulating expectorant. She was soon well.

Since then I have used cocaine locally in a great many cases, not always, however, with the same benefit, but never have had it totally fail. I have never depended entirely upon the cocaine, but have used expectorants to clear away the mucus, and sometimes have had the throat washed with a boric- or carbolic-acid solution. I have never seen a case of poisoning. I have not tried a ten-per-cent. solution, as mentioned by Dr. Holt in his paper published in the Journal for October 23d. I have the four-per-cent. solution applied after the cough and not at regular intervals. The effect of the drug seems to last long enough to prevent recurrence of the spasm. I always give these patients cod-liver oil and nutritious diet.

Respectfully,

Walter L. Carr.

THE PNEUMATIC CABINET.

252 Madison Avenue, New York, *October 26, 1886.*

To the Editor of the New York Medical Journal:

Sir: An advertisement offering for sale a pneumatic cabinet not made by this company has recently appeared. Both the advertiser and the manufacturer of this imitation have been sued for infringement of this company's patents. That no physician may be misled into a purchase which will entail the expense, loss, and vexation of a lawsuit, we give this fair warning: 1. This company owns all the letters-patent under which the pneumatic cabinet is made. 2. No cabinet other than this company's instrument can be lawfully made. 3. This company will pursue with suit for injunction and damages any person who shall use any cabinet not made by them. 4. Although the imitation cabinet already mentioned is incapable of the characteristic action of the real cabinet, this company will sell to physicians the perfected instrument as cheaply as the other can be sold.

The Pneumatic Cabinet Company.

Proceedings of Societies.

NEW YORK SURGICAL SOCIETY.

Meeting of October 11, 1886.

Dr. L. A. Stimson in the Chair.

Laparotomy for Gunshot Wounds.—Dr. William T. Bull related the histories of two cases, and showed one of the patients.

Case I.—A clerk, fifty-seven years of age, of intemperate habits, shot himself in the abdomen with a pistol of ·32 caliber about 9 a. m., January 10, 1885, and was brought to the Chambers Street Hospital by ambulance two hours later. On admission, he was suffering from shock and loss of blood. The surface was cold and very pale. The pulse was 100 and feeble, the respiration 24, and the axillary temperature 94° F. He was rational but dull, had vomited once, and had little or no pain. In the epigastric region was the entrance wound of the bullet, three inches above the umbilicus and an inch and three quarters to the left of the median line. The wound of exit was on the right side, in the axillary line, midway between the ribs and the crest of the ilium. There was no bleeding from either wound. Urine drawn was normal in appearance. Four hours later, notwithstanding every effort, his condition was worse, the temporal pulse being 134, the respiration 28, and the temperature 97°. 750 c. c. of a saline solution were infused into the cephalic vein in the course of twelve minutes. This was followed by improvement, and at the expiration of three hours the radial pulse was 112, and of fair volume, the respiration 24, and the temperature 96·25°. At 9.30 p. m. the speaker performed abdominal section. The man's general condition had undergone a decided change from that noted three hours after the infusion. From the situation of the two wounds and the evident signs of hæmorrhage it was inferred that the liver had been wounded, and the operation was done in the hope of arresting the bleeding.

The incision was made from an inch below the ensiform cartilage to three inches above the pubes, and showed at once that the bullet had entered the left lobe of the liver, cutting it nearly in two (transversely). The intestines were floating in bloody serum and clots. A few loops of uninjured intestine were drawn out in order to expose the right lobe of the liver, and the blood was rapidly sponged out, but it welled up from beneath the liver as fast as it was removed. The pulse began to fail after the abdomen was opened, and before the cavity had been cleared so as to allow of a satisfactory inspection the patient expired, just half an hour from the time the administration of ether was begun. There were no other visceral wounds. The bullet had traversed the left lobe, and passed through the round ligament, the lower edge of the right lobe, and the abdominal wall. The vessels in the transverse fissure had escaped injury.

Case II.—A sailor, twenty-five years old, was brought to the Chambers Street Hospital in a cab, August 12, 1886, at 7.40 p. m. He came first to the reception-room without assistance, complaining only of pain in the abdomen while walking. Twenty minutes before, he had been shot with a pistol of ·38 caliber. He was slightly pale and was perspiring freely, and since the injury had felt some nausea but had not vomited. The axillary temperature was 97°, the pulse 96 and full, and the respiration 26. The abdomen was normal to the sight and touch, but for the presence of a bullet-wound two inches below and two inches to the left of the umbilicus, in the vicinity of which it was tender on pressure. The skin about the wound was normal; the edges were blackened and the lumen was occupied by a dried clot of blood. No trace of the bullet could be found inside the skin. The urine was drawn, and was free from blood. Rectal examination was negative. After thorough washing of the skin, the wound was covered with a compress of iodoform gauze and absorbent cotton, and an eighth of a grain of morphine was given hypodermically. The man had always been in good health, drank only occasionally, and was of excellent physique. The dangerous character of the wound was explained to him, and he consented at once to an operation. Two hours later his condition was as follows: Pulse, 104; respiration, 24; temperature, 98°; no pain; slight rectal tenesmus; abdomen unchanged. A probe could not be introduced beyond the muscular layer. Hepatic dullness was normal. There was no emphysema about the wound.

At 9.40 P. M. ether was administered, and the operation was begun fifteen minutes later. The wound was explored by an incision three inches long and found to pass directly backward through the rectus muscle. The incision was then made in the median line from the umbilicus to the pubes. Coils of small intestine came at once into view. These were bathed in odorless bloody serum, several ounces of which escaped from the cavity. As the patient's general condition did not indicate any serious hæmorrhage, the intestine was examined without waiting to sponge out the cavity. About half the length of the small intestine was drawn out, rapidly sponged, inspected, and placed under warm towels, before a wound was discovered. Then a loop was met with through which the ball had evidently passed. The wound on one side was evidently that of entrance. It was as large as the top of a lead-pencil, its edges adhering without prolapse of the mucous membrane. The other, directly opposite, between the free and attached border of the gut, was twice as large, with a little fold of mucous membrane occupying the lumen. There was no escape of fæces. The gut was held up by an assistant, a sponge placed beneath each wound, and the abdominal incision protected by a large flat sponge while the sutures were inserted, after Lembert's method. The finest iron-dyed silk was employed. Three sutures sufficed for the first and six for the second wound. Iodoform was rubbed along the line of suture. Several more feet of small intestine were examined without any other sign of injury being found than half a dozen subperitoneal extravasations of blood no greater in area than a pea. The mesentery was dotted with smaller extravasations. There was no decided congestion of the gut nor any lymph of exudation on its surface. The pelvis was then occupied by one or two coils of small intestine and the sigmoid flexure, while the cæcum projected from the right side partly obscured by the small intestine. To examine the rest of the gut, at least two tumblerfuls of clotted blood were removed with the hand and sponges. It was then evident there was hæmorrhage from some vessel deep in the pelvis. It was not very acute, for the pressure of a large sponge controlled it. All the small intestine that could be drawn out was then held under towels outside the wound and the sigmoid flexure also exposed to view. A longitudinal wound half an inch in length was met with close to the attached border. The muscular coat was bared, but no mucous membrane was seen. This wound was closed with four sutures, the cæcum was now pushed out of the way, and a view obtained of the sigmoid flexure and mesocolon, and the source of the bleeding discovered to be a circular wound near its attachment to the middle line and fully three inches from the edge of the gut. When the mesocolon was made tense by traction on the flexure, the bleeding ceased; when it was relaxed, a stream of venous blood issued from the wound so copiously as to fill the cavity of the pelvis a third full several times before it was controlled. Pressure below the wound stopped it, but the vessel from which the blood issued could not be seen even after the wound was enlarged with scissors. The tissues on the lower edges, where pressure was effective, were finally grasped in a large "bite" with long artery-clamps. A silk ligature was passed by means of a curved needle under the blade of the forceps and tied as the forceps was withdrawn. This controlled the bleeding. Above and to the inner side of the wound there was an extravasation of blood, which, as it was firmly clotted, was not interfered with. Another wound of the mesocolon, stripping off its peritoneal coat over an area as large as a quarter of a dollar, was found close by. This and the preceding one were not sutured, but rubbed thoroughly with iodoform. One of the appendices epiploicæ, of good size, was found torn and bleeding at its extremity. It was tied at its base with catgut and cut off. Considerable blood had been observed to come into the pelvis, from the region of the cæcum, during the efforts to stop the hæmorrhage already referred to, but, on careful sponging, there was found no fresh source of bleeding. A sponge in the grasp of a long forceps was passed into both the lumbar and the epigastric regions and brought out perfectly clean. The omentum had not been seen up to this time, but the sponge drew it out from the left lumbar region, and its extremity, being found lacerated but not bleeding, was tied with silk, and three inches of it were cut off. The rectum was again examined with the finger, and, the bullet not being found there, it was concluded that it was lodged in the extravasated blood in the mesocolon, and it was decided not to search for it further. Several pints of warm carbolic-acid solution (about 1 to 100) were poured from a pitcher into the pelvis and sponged out, and the intestines as they were replaced were freely washed with the same solution. The abdominal wound was sutured with silver wire and silk sutures passing through all the layers, also with superficial catgut sutures. A continuous catgut suture was applied to the peritonæum, iodoform gauze covered the line of suture, and over this a compress of carbolized gauze was applied, with a metallic coil (Leiter's) held in place by a binder. The incision into the bullet-wound was stuffed lightly with iodoform gauze. The duration of the operation was an hour and fifty minutes. The intestines were held outside the cavity just an hour, and thirty minutes were spent in applying the sutures. Ether was given for two hours and ten minutes. The pulse at the end of the first hour was 116, at the close of the operation 128, and of fair volume. The extremities were cold, but respiration was satisfactory. Four subcutaneous injections, each containing a drachm of whisky and ten minims of tincture of digitalis, were given during the last hour. The room was not specially prepared for the operation. It was the one used for out-patients during the day. In other respects the utmost attention was given to antiseptic details. The sponges were taken from a five-per-cent. solution of carbolic acid, in which they had been lying for two months, and rinsed in a two-and-a-half-per-cent. solution. During the operation they were washed in a much weaker solution (about 1 to 100), and the silk employed the speaker had boiled himself in a five-per-cent. solution for half an hour previous to the operation. The towels employed were old ones, which had been washed in a two-and-a-half-per-cent. solution, and were kept warm with a heater.

On the 14th, at 10 A. M., the pulse was 108, the respiration 34, and the temperature 100°, thirty-six hours after operation. Reaction had been prompt, and ice-water was run through the coil twelve hours later, and was now continued. Magendie's solution, ♏xxxij, had been given subcutaneously in five injections, ice by the mouth, and five enemata of beef peptonoids and whisky. During the last twelve hours he had been allowed champagne, or milk and lime-water, every two hours. He had dozed most of the time, and complained of little pain. There was slight tympanites, and he was troubled with occasional cough, with slight mucous expectoration. The urine drawn by the catheter had amounted to ℥xx. It was high-colored and contained urates, but no albumin. Up to the 17th, the fifth day, the progress of the patient was uneventful.

There was slight pain and tympanites, but no nausea or vomiting. Liquid diet had been given, with occasional doses of morphine hypodermically. The use of the cold-water coil had been continued, though the temperature had not been over 100·5° nor the pulse over 100. A copious normal but soft fæcal evacuation took place after an enema. A purulent collection on the wound made itself evident by discharge about the sutures. The line of union, which was firm, was broken down and a thin layer of pus found at the bottom on the extra-peritoneal tissue. In the upper half of the wound the peritonæum along the line of sutures was sloughing, and, on parting its edges, a portion of intestine was visible firmly adherent to the parietes. It was mopped with a two-and-a-half-per-cent. solution of carbolic acid, and stuffed lightly with iodoform gauze. The pulse, respiration, and temperature were normal after this. On the 18th (sixth day), while he was coughing in the night, a piece of gut protruded from the upper third of the wound, but did not overlap the skin. Its surface was coated with grayish lymph with granulations in places. The wound was five inches long and two inches wide. The edges were held together with two "relaxation sutures" of silver wire, and compression was made on the intestine with a small pad of iodoform gauze and wood. By means of these the gut was pushed back from day to day while the edges were being drawn together and the lower part of the wound was filling with granulations. On the ninth day solid food was allowed. On the eighteenth day the intestine was on a level with the wound, and the whole surface was granulating. Skin-grafts were put on several times, and at the end of eight weeks the cicatrization was complete. It was now only a week that the patient had been out of bed.

(To be concluded.)

AMERICAN LARYNGOLOGICAL ASSOCIATION.

(Continued from page 471.)

The Laryngeal Image during Singing.—Dr. French having read a paper on this subject (see page 511), the following discussion took place:

The President: I wish to express my admiration of the photographs just exhibited by Dr. French. The question must be asked, Do not the variations in which the same note is formed in different persons in some way relate to other parts of the economy than the larynx? Do not the velum, the resonating chambers, and the epiglottis enter into the formation of the singing tones as well as the vocal bands? I would venture to make the suggestion that the quality of the tone be recorded with the image. It is true that the judgment as to the value of the musical tone is a critical one and can not be made a part of the scientific method; but I can not avoid the conclusion that some of the differences figured by Dr. French were coincident with the fact that some of the forms photographed were from individuals who, while reaching the desired pitch in the tones, did so at the sacrifice of musical quality.

Dr. Seiler: The president has expressed my own view in this matter. The photographs shown do not represent or furnish anything definite with regard to what is known as the registers of the voice, and every trained musician will recognize variations in the tone of the voice, which are known as the registers of the voice, which can not be revealed by the laryngoscope, or any instrument whatever. I have noticed in the photographs variations in the chink of the glottis in producing the same tones with different larynges; it was stated that the chink of the glottis in some was altered in shape during the production of a certain note by the mere fact of an increase of the air-pressure. Dr. French does not tell us how much pressure of air in the lungs accompanies each position, and we do not know how much of the change is attributable to the tone, and how much may be due to variation in shape of the chink of the glottis, posteriorly or anteriorly, in order to allow the extra blast of air to escape. Moreover, the photographs do not show the difference in the quality of tone in notes of the same pitch. This is to some extent controlled by the resonant cavity; otherwise one man could not imitate the voice of another, or imitate the cry of an animal. Therefore, they do not teach much about the musical quality of the voice or tones of what is called the register. In conversation with Madame Seiler, she expressed the opinion, after seeing these photographs, that only one out of twenty female voices could produce the head tones properly without instruction; they generally force the higher notes instead of singing them naturally. For instance, I recall the fact that there were a number of female singers connected with the German, Italian, and American opera who were in this city last winter, only one in three of whom truly possessed the head tones; the others forced the head notes by air-pressure. This difference between the natural and forced production of tones produces a variation in the quality of the tone which is readily recognized by the unaided ear of persons trained in music. Now, take one of the cases referred to and put a mirror in the throat, and it will not show the difference which is so promptly detected by the ear. In fact, with a mirror in position, it is not possible for the head tones to be produced under ordinary circumstances, or without previous training. It is only by the reciprocal action of the air-chambers and the larynx, the former modifying the vibrations of the sounds produced by the latter, that the head tones are formed. This is well illustrated in the production of the trill, which is the result of tuning the resonant chambers by voluntary effort one half-note above the note produced by the vocal membranes. When this is done, the voice will trill backward and forward between the tone of the larynx and the resonant chambers. The manner of the formation of the trill I accidentally discovered when a boy by attempting to whistle into a long tube or blow-pipe. I found that when I whistled the fundamental note, or its harmonic, I succeeded in producing an uninterrupted sound. I then tried to whistle half a note higher than the fundamental tone, and found, after repeated trials, that I could not produce a clear tone, but made a trill. The inference was made that the same thing occurred in the human voice when a trill was produced, hence I formed this theory as an explanation of the trill in singing.

I have stated that the photographs take no account of the vocal register. Now, this register may be changed in various ways. Referring to the photographs of the larynx in a position to form the bass notes, which have just been shown, I would say that you may have a bass singer who, in singing a note, produces a sound in which can be heard the rattling of the vocal cords and noise of escaping air—what is called a straw bass; or you may have the same tone produced soft and mellow. I conclude, from the great difference in the sound, that the photographs of the larynges during the production of these sounds would be different. In the first case the glottis would be widely open in its posterior part and in front, while the bands would approach each other in the center; whereas, if the tone was produced in a soft, mellow way, as it ought to be, the photograph of the larynx would show only a linear or elliptical opening in the glottis—that is to say, the membranous portion of the glottis would be nearly closed, and the cartilaginous portion would be closed entirely, or, in other words, the sound would be produced as described by authorities generally.

Dr. French deserves more than a mere vote of thanks for the labor, ingenuity, and perseverance he has displayed in this line of research, and, if he continues, he will certainly reach the goal of his ambition. I hope, however, that he will also devote some attention to the register of the voice, and train his ear to recognize changes in tone, so as not to depend entirely upon the laryngoscope to show differences in the quality of tones.

Dr. Delavan: I would like to ask the last speaker what is meant exactly by the register of the voice. Some music-teachers say that there is no such thing as a register of the human voice. The question I want answered is, Is there such a thing as a register or not?

Dr. Seiler: In every voice which has not been cultivated, what Dr. Langmaid calls a normal voice, there is a certain division, in ascending or descending the scale, which can be recognized by the ear. For instance, there are certain features which all kinds of voices have in common, and that is a difference between the chest notes and the head tones; there is a break where one ends and the other begins. This is expressed by the term "register," which is borrowed from the organ, where we have the oboe, the flute, and other registers. The difference is not in the pitch, but in the quality of the tone. It is true that there are good authorities who deny that there is such a thing as a register in the human voice, but they beg the question merely by calling it by some other name. Merkel, I believe, goes so far as to say that he distinguishes between the true voice and the false voice. In fact, all musical authorities agree in admitting that there is a difference between the quality of musical sounds produced by the singing voice, whether they call it register or something else.

Dr. Langmaid: It is very interesting to find that in this association, after the reading of such a paper as we have just heard, the president and the fellows join in an intelligent discussion of the subject presented. I think that Dr. French has begun right. He has given merely the observed facts without any theories; he has not spoken of the action of muscles, or of resonators, or of the formation of tones; but has simply given photographs showing the appearances of the vocal cords when producing notes of a certain pitch. I merely wish to reiterate opinions expressed in a paper read some years ago. The preceding speakers have expressed my thought, that the perfectly normal formation of voice is a rare thing; a perfectly normal tone is rare, and in the same voice there are variations, which may be called abnormities, one part of the voice being produced properly and in an economical way, and another showing a waste of force and of air so that the note is extravagantly produced. This was illustrated in one of the photographs exhibited by Dr. French, where, instead of the long narrow chink which he expected to find, he saw a short, rather elliptical opening.

I have no doubt that, if I should ask Dr. French if he had not recognized differences in quality of tone corresponding with variations in the shape of the glottis, he would answer, Yes. But in his communication his statements were very guarded. He did not tell us that the tone produced by a contralto voice, in singing a certain note, was the same in quality as that produced by a soprano at the same pitch, but I have no doubt that, if he were to formulate his opinion, he would say, as Dr. Seiler did, that he could tell, by looking at the glottis, the quality of the tone. I think he could, I know that Dr. Seiler could, and I know that I could.

It has been observed that the shape of the glottis is not constant in the formation of certain tones. There is a variation in the force of the wind-blast, which affects the shape of the glottis, as Dr. French has graphically shown, so that, if a singer makes a note in the easiest manner, he forms a definite opening between the vocal bands; on the other hand, if he should use a greater wind-blast, the shape would be modified to accommodate the greater pressure. The books do not show this; they only give one position for each note. I hope that Dr. French will go on and follow up his investigation of what takes place, and not do as Dr. Seiler has suggested—formulate a theory of the formation of tones.

Dr. French: I have already occupied so much of the valuable time of the association that I will add but a few words. A very large amount of work must be done in this direction before such questions as have been brought up in the discussion can be definitely settled. The display of to-day covers only a small portion of the field, and I have but complied with the agreement which I made, which was that I should show the results of the work as far as I had gone. As Dr. Langmaid has observed, I have advanced no theories, but simply presented facts. All books on the voice, and most text-books on diseases of the throat, contain descriptions of the laryngoscopical appearances in the production of the voice. But why do these descriptions differ? An attempt to answer this question was the main motive for the presentation of my paper and photographs to-day. I have said nothing whatever about resonant chambers, registers, or quality of the voice. On some future occasion I hope to be able to throw some new light on these subjects.

ALUMNI ASSOCIATION OF THE WOMAN'S HOSPITAL.

Second Meeting.

(*Concluded from page 414.*)

The Abuse of Intra-uterine Medication.—In the discussion of Dr. B. McE. Emmet's paper, Dr. T. A. Emmet made some remarks, also on that by Dr. Goffe. He said that it was natural (attributing, as he did, to pelvic inflammations so important a bearing on the diseases of women) that he should soon come to the opinion that the discharges from the uterine canal and from the vagina were only symptoms, and not the disease. It was about seven years since he had ceased to make applications to the uterine canal except for surgical conditions. Recognizing the close sympathy between the uterine canal and the peritonæum, and consequently the danger of making applications, he had not during those seven years made an application to the endometrium except when the symptoms pointed to the existence of granulations or other surgical affection. Since he had adopted this change in the treatment of his patients their stay in his private hospital until a cure was effected had been on the average several weeks shorter than formerly. That fact spoke volumes. The sympathy between the uterus and the peritonæum was such that the danger of applications to the lining membrane was great, and it was consequently better to make applications to the vagina. If the absorbing surface of the vagina was not so good, it was much greater and much safer.

With regard to the term cellulitis, it was of little importance except to the pathologist whether we called it a cellulitis, a peritonitis, a lymphangeitis, or a phlebitis. He would not dispute as to the term. But there was a disease present which it was exceedingly dangerous to trifle with in practice, and we must respect it. He was glad the discussion had arisen, because it would probably bring us to more accurate knowledge of the condition of things, and the term cellulitis was open to objection because too general in its meaning. All had recognized cases in which there was a cellulitis, also cases in which there was a peritonitis, and others in which there was both a cellulitis and a peritonitis. That there might be a pelvic cellulitis, he thought was beyond question. Abscesses in the cellular tissue were seen elsewhere in the body, and why not in that of the pelvis? He believed that in the beginning, unless the inflammation started in the tubes as the result of a gonorrhœa, the disease was a cellulitis. But what took place after the connective tissue had been inflamed for a while? It became destroyed; it disappeared like a piece of vellum rolled up. All had recognized after a pelvic inflammation a cord or band far below the dip of the peritonæum. After the cellulitis had existed for some time the cellular tissue disappeared, and the peritonæum became inflamed. With the disappearance of the cellular tissue the vagina was drawn up against the peritonæum. With the adhesive inflammation of the peritonæum the *cul-de-sac* disappeared, and the first sign which was recognized in a woman recovering from a pelvic inflammation, call it a general pelvic cellulitis, was a ballooning of the vagina and rectum. But the practical question related to treatment.

Dr. W. H. Baker, of Boston, said that he was not sufficiently well versed in pathology to speak upon the subject from that standpoint, but he could see the importance of getting rid of the results of the circum-uterine inflammation. He had no doubt that an abscess might form in the cellular tissue of the pelvis, and undoubtedly the peritonæum might be involved secondarily, and when so involved it became the most important consideration. But, on the other hand, he believed that in the large majority of cases the inflammation began in the peritonæum, and afterward involved the cellular tissue beneath. As to the tolerance of pus on the part of the peritonæum, there were exceptional cases in which that tolerance was very marked. An abscess in the peritonæum was not necessarily fatal. He agreed with Dr. Bache Emmet as to the importance of careful differentiation in these cases. When a student, nearly twenty years ago, he heard during the entire course of lectures only one properly gynæcological, and that was on "leucorrhœa." We could search the text-books of the present day faithfully and fail to find this condition spoken of as of importance except as a symptom. Yet it was treated every day practically as a disease and not as a symptom by such applications as had been mentioned by the author. It was important to make a careful diagnosis to determine whether the endometritis was primary before resorting to such treatment as was ordinarily given by the general practitioner.

Dr. W. Gill Wylie said that he was an advocate for proper intra-uterine medication in suitable cases. Before resorting to intra-uterine medication, a clear diagnosis must be made, and in all cases a certain amount of preparatory treatment should be given. In acute diseases he did not give intra-uterine treatment. If the uterus was much enlarged, he reduced it before resorting to intra-uterine treatment, and, if it was fixed by adhesions, he did not give such treatment until it was rendered freely *movable.* In dysmenorrhœa, after dilating or divulsion, he always made an intra-uterine application to the lining membrane just at and above the os internum. He never made an intra-uterine application without first passing a dilator to open the canal if necessary to enable him to make the application through a silver tube, which prevented the application rubbing off as it passed up through the cervix. The dilatations also insured thorough drainage after the application. After curetting, he always made an intra-uterine application.

Book Notices.

Medicine of the Future. An Address prepared for the Annual Meeting of the British Medical Association in 1886. By Austin Flint (Senior), M. D., LL. D. New York: D. Appleton & Co., 1886. Pp. 37. [Price, $1.00.]

This posthumous paper is most elegantly published, and embellished by a portrait of the author, which stands as the frontispiece. The work of the printer has been carefully done. The whole reminds one of the Scriptural text, "Apples of gold in pictures of silver."

A sad interest attaches to the book, as being the last effort of one whom we all loved to honor, one who had always been faithful to the traditions of his profession, and who had, by his own labors, contributed much toward its advancement. Standing in the sunset of life, as he looked toward the west, the sky was suffused with a pleasant glow, and the future of the profession was tinted with the *couleur de rose.* It is a sign of a great mind and a well-spent life when one who is already approaching its twilight can still look forward with such a cheerful heart as that which unbosoms itself to us in these pages.

But, as the author says, the progress which has been achieved in the last half-century justifies the hope of still further and equally important advances in the fifty years to come. We who have been marshaled into the ranks within the past ten or fifteen years can scarcely credit the statement that the memory of any living man can go back to the time when the connection between dropsy and renal disease was unknown. Yet it is less than forty years since this important pathological observation was made by Richard Bright.

It is but thirty-six years since Rudolf Virchow published his "Cellular Pathology," and made the greatest epoch since the discovery of the circulation of the blood.

It is only about forty years since the discovery of anæsthesia. The world of science is indeed moving rapidly, and we know not what startling revelations are awaiting us in the near future. Among the many speculations into which the author enters in his speculative mood, there is none more interesting than those concerning the future of medical literature and medical instruction. It was evident to him that in the former, as in literature generally, the development of specialism must continue. His views in this respect would hardly be acceptable to the editor of a provincial journal who has recently authoritatively announced that "the specialists must go." When specialism is abolished, art, science, and literature will fall into a decline as great as that which characterized the Dark Ages. In regard to medical instruction, Professor Flint took the most advanced ground. The necessity for reform in that department seems to us even greater than he thought. "Fifty years ago," he writes, "it was customary for a professor of medicine to write out in full lectures on pathology and practice (sometimes including physiology), which, with interlineations, were re-read year after year." We are sorry to say that our memory has only to travel back as many weeks for a very good illustrative example; and that it is our belief that quite a number might now be found without traveling many hundred miles from the metropolis. The best tribute that the profession of America could pay to the memory of its deceased leader would be to carry out the reform indicated in the pages of this, his last gift to them.

Vorlesungen über orthopädische Chirurgie und Gelenkkrankheiten. Von Dr. Lewis A. Sayre, Professor der orthopädischen und klinischen Chirurgie am Bellevue Hospital, etc. Zweite sehr erweiterte Auflage. Autorisirte deutsche Ausgabe von Dr. F. Dumont, Assistenzarzt der chirurgischen Poliklinik zu Berne. Mit 265 Holzschnitten. Wiesbaden: J. F. Bergmann, 1886. Pp. xvi–395.

The German student of orthopædic surgery is to be congratulated on the translation of Dr. Sayre's lectures. He will here find a practical guide to treatment, in following which he will have an opportunity to forget many of the pathological theories which have obscured the subject of diseases of the joints from a German point of view, also encouragement to question the correctness of Hueter's opinion that suppuration in the hip joint is a "nearly absolutely fatal process."

It is an agreeable surprise to find, as we do here, a book in the German tongue, albeit a translation, on diseases of the joints which leaves out of account struma and tubercle, and proceeds, with practical common sense, to prescribe methods of saving the life and the joint even in the presence of the terrible bacillus. The book has already excited vigorous opposition. (See "Criticism of a Criticism," pp. 298, 299 of the present volume of the Journal.) Dr. Sayre is by no means opposed to operating on a diseased joint; but the drift of his teaching in these lectures is in the direction of saving the affected joint, if possible, by mechanical treatment and expectation, regardless of the presence or absence of tubercle, which appears to be, in the minds of not a few knivesmen, nearly akin to the giant cell of sarcoma. It might have been confidently anticipated that this forcible and attractive presentation of the value of the conservative treatment of diseases of the joints would stimulate the countrymen of Volkmann, who is said to have tabulated two hundred and fifty operations on diseased joints occurring in his own experience, in which there were only five or six specimens free from the bacillus of tubercle. The lectures lack a good index.

Lectures on Dietetics and Dyspepsia, delivered at the Owens College School of Medicine in February and March, 1885. By Sir William Roberts, M. D., F. R. S., etc. Second Edition. New York: G. P. Putnam's Sons, 1886. Pp. ix–92. [Price, $1.]

This valuable little brochure, by an author well known through his classical treatise on urinary and renal diseases, is exceedingly interesting and contains many useful hints on dietetics and dyspepsia. It embodies five lectures which, in the author's words, "do not pretend to be in any sense systematic. They are the fruit of some desultory laboratory work and of reflections relating to the subjects of dietetics, digestion, and dyspepsia." Though professing to give the result of laboratory work, the author does not treat his subject as if the human economy were merely a test-tube and as if the changes going on within it could be exactly reproduced in the laboratory. He thinks that the accumulated experience of the mass of mankind possesses great weight and significance, and, if studied closely, would yield more practical value than any number of test-tube experiments. The effects of tea, coffee, and alcohol are concisely and plainly stated according to experiments carried out by the author. We heartily commend the book.

Illustrations of Unconscious Memory in Disease, including a Theory of Alteratives. By Charles Creighton, M. D. New York: J. H. Vail & Co., 1886. Pp. xv–212.

Whatever good points this work may possibly possess, it still has one peculiarity which is in itself fatal—it has been written a hundred years too late. Time was when Monsieur le Comte de Buffon could sit in the miniature classic temple which formed his arbor, and, arrayed in his most gorgeous apparel—buckles, silk stockings, satin breeches, embroidered waistcoat, velvet coat, frilled shirt, powdered hair, and court sword, as we are told was his wont—compose a Natural History which should at once become the authority for the scientific and the admiration and delight of the polite world. It is said, too, that a German philosopher once evolved a camel out of the depths of his inner consciousness, but the day is no more when such a birth would be received as the real article.

Our author lays before us a mixture of some severe cogitations of his own, together with the philosophical meditations of others, which has evidently cost him much trouble, but alas! we fear it will prove of small avail with the skeptical and inquiring scientific spirit of to-day, which no longer tolerates the application of metaphysical speculations to the elucidation of scientific facts, but requires proofs of the strictest and most searching kind. In a curiously inconsequential and foggy manner Dr. Creighton essays to show (what as heredity has long been generally recognized) that all cells are endowed with "unconscious memory," in virtue of which they perform their functions. When cells become changed for any reason, their memory is impaired; they then perform abnormal functions, and so disease is constituted. Continued impairment of "organic memory" gives rise to chronicity in disease and to the gradual change in form which many diseases undergo. It is thus that a clap becomes a gleet, an innocent sore a syphilitic chancre, and so on—but it would be useless to give a serious analysis of a book so marked by amusing absurdities as this one is. The few truths it contains have long been known and appreciated, but they are here so deeply imbedded in errors as not to repay the trouble of extraction. There are some singular features in it, however, interesting from a psychological point of view as illustrating the peculiar illogical construction of some minds. One such feature is the prevalence of long quotations from various writers—mostly old ones—which, though certainly related, do not seem to prove at all what they are intended to. Another, and perhaps the most amusing of all, is the complacency with which the author so often quotes his own previous productions in proof of the correctness of his present views! His lofty indifference to modern discoveries—such trifles as the existence of pathogenic organisms, for instance—and the ease with which he refers to a "fly-sheet" written by himself for complete refutation of Koch's discovery of the tubercle bacillus, are in their way quite sublime. For a half-hour's entertainment this book may be safely borrowed.

A Text-book of Medical Chemistry, for Medical and Pharmaceutical Students and Practitioners. By Elias M. Bartley, M. D., Adjunct Professor of Chemistry, etc., in Long Island College Hospital, etc. With Forty Illustrations. Philadelphia: P. Blakiston, Son, & Co., 1885. Pp. 376. [Price, $2.50.]

This is a fairly good treatise, giving to the student perhaps all that he requires in order to pass examinations, and containing a satisfactory modicum of the theory of the science. The author's experience as a lecturer has shown him what medical students require and what they are likely to retain. Nevertheless a little more grounding in the theory of chemistry and a little more insistence upon principles seem to us essentials in a book which is to teach students chemistry as a science, and, in our opinion, it should be taught in no other way.

GENERAL LITERARY NOTES.

Among recent foreign publications we note the following:

J. & A. Churchill, London.—A. T. Wise, "Alpine Winter in its Medical Aspects," 2d ed. (2*s.* 6*d.*)

F. Alcan, Paris.—Péan, "Leçons de clinique chirurgicale." (20*fr.*)

Asselin et Houzeau, Paris.—De Beurmann, "De la médication abortive." (4*fr.* 50.)

J. B. Baillière et Fils, Paris.—J. A. A. Rattel, "Des cornets acoustiques," etc. (1*fr.* 50.) —— J. Masselon, "Précis d'ophthalmologie chirurgicale." (6*fr.*)

G. Masson, Paris.—A. Robin, "Leçons de clinique et de thérapeutique médicales." (8*fr.*) —— P. Diday et A. Doyon, "Les herpès génitaux." (6*fr.*)

F. Savy, Paris.—T. Malosse, "Calorimétrie et thermométrie.' (2*fr.* 50.)

J. F. Bergmann, Wiesbaden.—F. Bezold, "Labyrinthnekrose und Paralyse des Nervus facialis." (2*M.* 70.) —— L. Löwenfeld, "Studien über Aetiologie und Pathogenese der spontanen Hirnblutungen." (6*M.*) —— H. Magnus, "Die Jugendblindheit." (6*M.* 40.)

Karl Garte, Leipsic.—"Zur Naturgeschichte des Medicus, kurzweilige Schattenrisse nach der Natur gezeichnet von Dr. Risorius Santorini, illustrirt von Dr. Corrugator Supercilii." (1*M.*)

J. C. Hinrichs, Leipsic.—E. Baldamus, "Die deutsche Litteratur auf dem Gebiete der Medicin und Pharmacie." (5*M.*)

Lipsius & Tischer, Kiel.—G. Neuber, "Die antiseptische Wundbehandlung." (1*M.* 60.)

E. S. Mittler & Sohn, Berlin.—W. Roth, "Jahresbericht über die Leistungen und Fortschritte auf d. Gebiete des Militärsanitätswesen f. d. Jahr 1885." (4*M.* 80.)

Paul Parey, Berlin.—A. Jörgensen, "Die mikroorganismen der Gärungsindustrie." (4*M.*)

Urban & Schwarzenberg, Vienna.—J. Munk u. J. Uffelmann, "Die Ernährung d. gesunden u. kranken Menschen. Handbuch der Diätetik." (14*M.*) —— R. W. Raudnitz, "Die Findelpflege." (2*M.*)

BOOKS AND PAMPHLETS RECEIVED.

On the Causes of Dyspnœa and Cardiac Failure in High Altitudes. By Frank Donaldson, Jr., B. A., M. D., etc. [Reprinted from the "Medical News."]

The Function of the Recurrent Laryngeal Nerve. From Experimental Studies in the Biological Laboratory of the Johns Hopkins University. By Frank Donaldson, Jr., B. A., M. D., etc. [Reprinted from the "American Journal of the Medical Sciences."]

The Curability of Insanity: a Series of Studies. By Pliny Earle, A. M., M. D., late Superintendent of the State Lunatic Hospital at Northampton, Mass., etc. Philadelphia: J. B. Lippincott Company, 1887. Pp. 4–7 to 232. [Price, $2.]

Report of Two Successful Cases of Trephining for Traumatic Epilepsy. By Carlos F. Macdonald, M. D., Medical Superintendent N. Y. State Asylum for Insane Criminals. [Reprinted from the "Journal of Nervous and Mental Diseases."]

House-plants as Sanitary Agents; or, the Relation of Growing Vegetation to Health and Disease. Comprising also a Consideration of the Subject of Practical Floriculture, and of the Sanitary Influences of Forests and Plantations. By J. M. Anders, M. D., Ph. D., lately Lecturer on Botany in the Wagner Free Institute of Science, Philadelphia, etc. Philadelphia: J. B. Lippincott Company, 1887. Pp. 12–13 to 334. [Price, $1.50.]

Transactions of the Medical and Chirurgical Faculty of the State of Maryland. Eighty-eighth Annual Session, held at Baltimore, Md., April, 1886.

The Amblyopia of Squinting Eyes; is it a Determining Cause or a Consequence of the Squint? By Samuel Theobald, M. D., Surgeon to the Baltimore Eye, Ear, and Throat Charity Hospital. [Reprinted from the "Medical News."]

Reports on the Progress of Medicine.

CUTANEOUS AND VENEREAL DISEASES.

By GEORGE THOMAS JACKSON, M. D.

Mollin.—Our German brethren are now very active in the production of new vehicles for dermatological medication, and *mollin* is the latest. Dr. T. A. Kirsten writes ("Monatshft. f. prakt. Dermat.," August, 1886, p. 337) very enthusiastically of this substance as a substitute for the usual ointment base in the mercury-inunction method of treating syphilis; he has found it easier to be rubbed in, cleaner, and more active than mercurial ointment. It also forms an excellent vehicle for the application of styrax in the treatment of scabies. Carbolic acid, salicylic acid, tannic acid, tar, balsam of Peru, chrysarobin, the white and red precipitate, and the bichloride of mercury, ichthyol, iodoform, naphthalin, naphthol, sulphur, and thymol combine readily with it.

Mollin is a soft soap (hence its name, from *sapo mollis*) which contains a seventeen-per-cent. excess of fat. As free alkali is impossible in such a chemical combination, the soap is unirritating. Only the best raw materials are to be used in its manufacture—that is, the best and freshest kidney fat and suet and the finest Cochin cocoanut-oil. The fat is saponified cold with potash and some soda, so that to 100 parts of fat there are 40 parts of lye. Into the mass thirty per cent. of glycerin is worked, and the whole carefully heated. When properly made, mollin has a pale-white color with a slightly yellow tint, and an agreeable, smooth, soft consistence. It is not essentially affected by exposure to changes of temperature or by being kept in open vessels. It is superior to an ointment in being perfectly clean, not soiling the under-clothing and not becoming rancid, and in being readily removed from the skin by warm or cold water, leaving it soft and smooth.

Ichthyol.—Dr. Joseph Schmidt, of Berlin, contributes a paper upon *ichthyol* to "The Therapeutic Gazette," which appears in its issue of June 15, 1886. He says that the drug represents the distillation product of a peculiar bituminous, sulphurous mineral obtained from the deposits of fossil fish, and its chemical composition is: Carbon, 55·05; hydrogen, 6·06; sulphur, 15·27; sodium, 7·78; oxygen, 15·83. The unpleasant taste of the drug may be disguised by the addition of a few drops of alcohol containing equal parts of cumarine and vanilline.

Diseases of the Skin in the Subjects of Gout.—Dr. Corlett ("Jour. of Cutan. and Ven. Dis.," Sept., 1886, p. 265) believes that the subjects of gout are predisposed to skin diseases which have peculiarities that "may be described as a hybrid between eczema and psoriasis." Those that he has observed were: First, scaly; the scales were neither heaped up nor of silvery character as in psoriasis, and when detached they left an oozing surface. Second, their color was reddish, closely resembling a syphilide. Third, they showed a tendency to symmetrical distribution. Fourth, they were met with in adults usually over forty-five years old, except when the gout was inherited. Fifth, they were accompanied by other evidences of lithæmia. Sixth, they were prone to return. These eruptions were most benefited by treatment directed to the gouty diathesis. Locally most benefit was derived from alkaline baths, preparations of tar, and ammoniated mercury.

Ill Effects of Arsenic in Psoriasis.—A physician who suffers with occasional outbreaks of psoriasis writes to the same journal his experiences in the treatment of his own case. He at one time took arsenic in increasing doses, by the advice of an eminent specialist, for an attack of his disease which had lasted for a year. While he was taking the drug the eruption spread rapidly, and became intensely itchy, and the skin at last became so congested that he could not bathe in salt water nor use soap, on account of the pain caused by them. He then stopped the arsenic, abstained from meat, tea, coffee, tobacco, and stimulants, ate fish, fruit, and vegetables, used laxatives, and applied chrysarobin externally. After three months of this treatment the congestion of the skin had much lessened. Then, under the use of Rochelle salts before breakfast and the application locally of salicylic and pyrogallic acids, there was some improvement. He finally fully recovered while taking a drachm of cod-liver oil with one minim of tincture of nux vomica after meals, calomel or Rochelle salts and an occasional diuretic, and using chrysarobin locally. At the same time he studied less, took more exercise, and took a cold bath before breakfast.

Arsenic in Skin Diseases.—Following Dr. Morrow's request, two papers upon the use of arsenic in skin diseases appear in the August number of the same journal. The first is by Dr. E. L. Keyes, who says: "I am not in a position to champion arsenic or any other remedy as a general 'skin-success,' but, if there is any other drug more far-reaching in its influence for good upon the skin in a general way, I have yet to learn it." Unless the stomach tolerates and appropriates it easily, he would not use the drug. He regards it as most useful in diffused, generalized, and chronic skin diseases. The more localized a disease is, no matter how chronic, the less apt is arsenic to do good, though sometimes it is useful in acne, in some cutaneous manifestations of syphilis, and in certain neurotic maladies.

The second paper is by Dr. W. A. Hardaway. He has found arsenic of value in certain cases of chronic inflammatory diseases of the skin, such as psoriasis, lichen planus, and "perhaps pemphigus," but very often no benefit has come from its use in these diseases. He has never seen the slightest good come from its use "in eczema and acne, excepting when the indications for its use were found elsewhere than in the skin." He has no faith in the curative influence of the drug in malignant affections of the skin.

Hyperidrosis.—In the "Med. and Surg. Reporter" for July 31, 1886, Dr. J. B. Johnson recommends for the treatment of hyperidrosis of the feet and hands a general tonic treatment with arsenic. The following combinations are advised for local use: Pure Carolina pine tar and alcohol, equal parts; to be applied twice a day with a camel's-hair brush and kept protected by cotton gloves. Or, thirty grains of tannic acid to one ounce of glycerin. Or,

℞ Calcis chlorinat.......................... ℥ iij;
Aquæ destillat.......................... Oj.
Solve et cola, et adde
Acid tannici.......................... ʒ iij. M.

Or, thirty grains of carbolic acid to one ounce of Richardson's styptic collodion; to be applied two or three times a week. Further, the feet may be soaked in a strong alum or brine foot bath.

Acne; its Nature and Treatment.—Dr. Tom Robinson, of London, is nothing if he is not original. His latest contribution to medical literature is upon acne ("Canada Lancet," August, 1886, p. 351), and will be found full of more or less original ideas. He divides acne into three varieties: 1. Physiological acne; 2. Climacteric acne; and, 3. Rose acne. Comedo he regards as a normal condition of all adult skins; and he holds that the source of irritation in acne is primarily decomposition in the sebum. In simple acne the inflammation is limited to the sac; where the surrounding tissues become inflamed, other factors are at work, such as scrofula and syphilis. Of the constitutional conditions which modify the progress of acne, the most common and pronounced is scrofula. Persons whose skins are thick and greasy, whose hair and nails grow rapidly, whose heads are scurfy, who are sleepy and stupid, who look muddy and are prone to stomach derangements, are the subjects of acne. Syphilis influences the course of acne, causing it to leave behind a coppery stain (!). Subjects of physiological acne exhibit a slowness in all their excretory functions, shown by indigestion, biliousness, constipation, scanty menstruation, and sexual debility. His climacteric acne is that form which occurs especially on the chin of women during the climacteric period.

In treatment, Robinson does not believe in strong stimulating measures, such as sulphur or soft soap. For comedones he recommends washing the face with cold water and soap at night, and sponging in the morning with corrosive sublimate, two grains; compound tincture of benzoin, two drachms; and almond emulsion, six ounces. Internally he advises acids in tincture of gentian three times a day, and every morning a glass of Pullna water. From the dietary he excludes pork, veal, hashes, stews, pastry, and an excess of sugar. Plenty of salt is to be eaten. After all, our author questions if we ever can cure acne.

The Treatment of Carbuncle.—Dr. Gay recommends ("Columbus Med. Jour.," August, 1886) the use of hypodermic injections of one part of carbolic acid and seven parts of olive-oil into the carbuncle at a number of points, and dressing afterward with carbolized oil and absorbent cotton. If the carbuncle is large and painful, the author advises applying absorbent cotton soaked in hot water for about twenty minutes before injecting the carbolized oil. He has also found injection of the carbolized oil (1 to 7) of great service in chronic indurated ulcers, the injections being made about the edges of the ulcer.

Lupus.—Two valuable papers upon lupus vulgaris appear in the "Vierteljahresschrift für Dermatologie und Syphilis" (1886, xiii, Hft. 2) which throw light upon the question now so much discussed: Is lupus a tubercular or non-tubercular disease? The first paper is by F. Block (p. 201), who unconditionally accepts the bacillus of tuberculosis as the exciting cause of lupus. He gives us an exhaustive study of the ætiology of lupus founded upon 144 cases occurring in Neisser's service in Breslau, and comparing his figures with those of Raudnitz in Prague, and Pontoppidan in Copenhagen. We shall present here only the statistics from Neisser's cases, as Raudnitz's and Pontoppidan's studies on this subject have already appeared elsewhere. *Sex:* Women were found to be far more often the subjects of lupus than men, they forming $68\frac{1}{10}$ per cent. of the cases. He thinks this may be due to the greater vulnerability of the female skin, or to the circumstance that their skin is not so well protected by a growth of hair. *Age:* Twenty-seven per cent. of the cases occurred before the fifth year of life, and over 50 per cent. before the fifteenth. The proportion, after falling to $1\frac{1}{2}$ per cent. at the age of thirty-five years, slowly rose till at forty-five years it reached $4\frac{1}{2}$ per cent., and then fell once more to $\frac{4}{5}$ per cent. *Primary Site of Disease:* In 89 per cent. of the cases the disease began on the skin, $59\frac{3}{10}$ per cent. on the head ($21\frac{1}{2}$ per cent. cheek, $20\frac{7}{10}$ per cent. nose), $14\frac{4}{5}$ per cent. on the neck, and $16\frac{3}{10}$ per cent. on the extremities. The trunk, the nape of the neck, the hairy portions of the head, the forehead, and the lower lip were in no case primarily attacked. Of the cases in which the mucous membranes were first affected it was that of the nose in the proportion of 70 per cent. Block believes that many cases of so-regarded chronic eczema of the nose are in reality lupus. Of the twenty cases of lupus of the neck, twelve occurred in men. *Diseases that preceded the lupus:* In half the cases a spontaneous or artificial opening of the lymphatic glands had taken place, and these were mostly in the neck. Sooner or later lupus nodules appeared in the neighborhood of the fistulæ. Other preceding diseases apparently directly connected with the lupus were erysipelas, dakryocystitis, chronic coryza, keratitis, caries, eczema, hydrops genu chron., scrofulous abscess, and injuries. *Complications:* In eighty-two of the cases there were other distinct symptoms of the scrofulous or tuberculous diathesis, twenty-eight patients having *phthisis pulmonum.* *Heredity:* In 25 per cent. there was undoubted evidence of a tubercular tendency in the families of the patients. In one family Block found two brothers with lupus, and in another a mother and daughter.

Dr. Block is led by this study to believe that lupus is a chronic tubercular disease of the skin and some mucous membranes. It may originate in an individual already the subject of hereditary or acquired tuberculosis, or in a person otherwise healthy, as a genuine tubercular disease. The second paper is by E. Sachs (p. 241), and also deals with the statistics of lupus, this time the study being made of 161 patients in the clinic of Czerny at Heidelberg. Like Block, he found the majority of the cases were in women, $62\frac{1}{10}$ per cent. Some 79 per cent. of the cases had their primary site upon the head, and nearly 74 per cent. began between the fifth and twenty-fifth year. In only seven cases could the cause be traced to a suppurating lymphatic gland, which is in marked contrast to Block's statistics. Sachs found in $55\frac{9}{10}$ per cent. of the cases absolute signs either of tuberculosis in the individual himself or in his family, and seven of the patients died of tuberculosis. In eleven cases, other members of the family had or had had lupus. Various methods of treatment were tried in the different cases, and forty-four were cured. Of these, twenty-three cases were treated by the dermal curette, followed by the thermo-cautery, and dressed at first with iodoform, later with iodoform ointment made with vaseline.

Lupus Vulgaris treated with Electrolysis.—Gärtner and Lustgarten have treated ten cases of lupus by electrolysis with good results. They give an account of their method in the "Wiener med. Wochenschrift," Nos. 27 and 28, 1886. Instead of employing the common method of puncturing the skin with steel needles attached to the negative pole of a galvanic battery, they use a flat electrode consisting of a silver plate slightly curved and set in a hard-rubber ring. The rubber ring is employed to prevent the edge of the plate from acting on the skin. The part to be operated on is washed with soap. A current of five to eight milliampères is allowed to flow through the part for ten minutes. The electrolytic action is confined to the diseased points, the cicatricial tissue or the sound skin between the lupus nodules being almost always unaffected. The lupus nodules, on the other hand, are excoriated and swollen, and give vent to a clear, watery, sticky fluid. After a few hours they sink in and become covered with a brown, leathery scab. The part should be dressed with iodoform and the scab allowed to fall, which it does in from eight to fourteen days. The result is a flexible pigmented cicatrix. The procedure is painless. The operation is indicated by the superficial location of the disease. It may be practiced both in the ulcerating and non-ulcerating forms.

The Inoculation of Leprosy.—An interesting case of this accident is reported by Dr. Hatch, of Bombay, in the "British Med. Jour." of June 26, 1886. A medical student, while making a post-mortem upon the body of a confirmed leper, cut his left forefinger at the tip and received a small abrasion over the dorsum of the right hand. On the next day there was painful swelling of the left supratrochlear gland. On the third day the axillary glands were enlarged and tender. On the fourth day there was an enlargement of the ulnar nerve, which was also tender; it was nodular and hard, and there was a shooting pain along it, extending to the ribs on the left side. He suffered from malaise and fever, and in a few weeks had pain in the small of the back, spermatic cord, and testicles. By the third month there was distinct wasting of the interossei muscles of the left hand and of the little finger, accompanied by loss of sensation. The condition remained the same for a long time, but in less than a year after the inoculation the nodulation of the nerve had almost disappeared and the patient felt perfectly well.

Pemphigus Vegetans is, according to Neumann ("Vrtljschr. f. Derm. und Syph.," 1886, xiii, 157), identical with the "syphilis cutanea papillomaformis (vegetans)" or "frambœsia syphilitica" of Hebra, and the "herpes vegetans" of Ausspitz. It was formerly supposed to be a product of syphilis; but Neumann now believes that it is in no wise related to it. It has two forms—P. vegetans foliaceus, and P.

vegetans serpiginosus—and is in either form of exceedingly grave prognosis, running its course to a lethal end in a few months. It begins with a few lentil-sized vesicles, at first flaccid, but soon fully distended, and of dull-white color. If the vesicle-cover falls, there will appear in a few days, in the center of the resulting excoriated place, a dull-white elevation, which rapidly increases. Soon we have an uneven, warty, exuberant growth, surrounded by an excoriated areola, bounded externally by epidermis raised by vesicles, and spreading out in serpentine lines. This surface secretes a foul, thin fluid of alkaline reaction, which dries into thin, easily separable crusts. The disease attacks both the mucous membrane and the skin. It usually begins on the skin of the genitalia. When a number of these growths are located close together on the genitalia and about the anus of a woman, they bear a resemblance to flat condylomata. They may be differentiated by the surrounding vesicular wall, by the loss of epidermis and epithelium over them, by the absence of other symptoms of syphilis, by the chronicity of their course, and the increasing marasmus of the patient. The disease is accompanied by symptoms of spinal irritation.

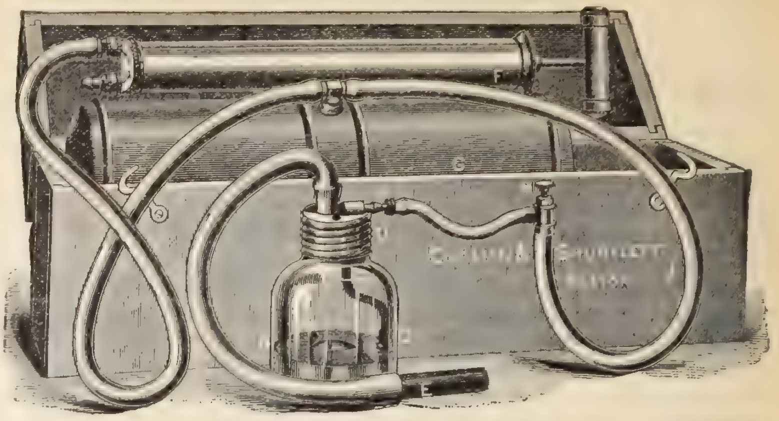
Dermatitis Venenata.—There are more specifics for poison-ivy eruption than for almost any other disease of the skin; at least it seems so. Of course, this means that the disease runs its own course. We would here note a few "sure cures." In the August number of the "Jour. of Cut. and Ven. Dis." for this year Russian baths are extolled by Dr. Regensburger, of San Francisco. In the September number of the same journal Dr. McGuire, of Louisville, Ky., advocates a lotion of *Grindelia robusta*, fifteen grains to the ounce of water. In the "Med. Record" for September 18, 1886, Dr. Williams, of Texas, recommends a strong decoction of common cup-oak bark, boiled to the consistence of tar, and painted on the diseased skin two or three times daily. Dr. Kell, of Ohio, has had most success with a saturated solution of chlorate of potassium applied on a cloth and changed every hour. Dr. Flowers, also of Ohio, has found that a fluid extract of boneset effects "an immediate cure." Dr. German, of Illinois, relies on the officinal glycerite of tannin, and Dr. Winsor, of Iowa, always takes the liquor potass. arsenitis till its physiological action is produced, when he himself is poisoned.

Gonorrhœa contracted from Rectal Coition.—An interesting report of an epidemic of gonorrhœa arising from sodomy is made by Dr. R. Winslow in the "Medical News" of August 14, 1886. The epidemic took place in a juvenile asylum near Baltimore, and was started by one boy who contracted gonorrhœa from a woman outside the institution, and subsequently had rectal coition with a boy inside the institution. Ten or more cases resulted. Examination of the rectum of one of the boys from whom another had contracted urethritis showed its mucous membrane to be red, painful, and inclined to bleed.

New Inventions, etc.

AN IMPROVED ATOMIZING APPARATUS.

Messrs. Codman & Shurtleff, of Boston, who were the pioneers in the manufacture of atomizers in America, have added to their already complete list of apparatuses one which, although based upon the invention of Dr. H. K. Oliver, in 1866, embodies a principle that has lately been revived in an atomizer described by Dr. G. A. Evans in the "New York Medical Journal" for March 6, 1886. The principle referred to is that of converting the medicine to be inhaled into a vapor sufficiently fine to resist condensation for a period long enough to admit of its being respired. This is accomplished by projecting the spray against a hard surface. The apparatus represented in the accompanying illustration consists of a glass jar, into which the atomizing tube, C, so curved as to discharge the spray against the opposite side of the jar, is inserted. The current of air from the air-chamber, G, carries the vapor through the rubber tube and mouth-piece, E, from which it is inhaled. The hand-pump, F, supplies the air to the air-chamber, the current of air being under the control of the physician or patient by means of the cut-off, H. The advantages obtained by this form of atomizer are: That it furnishes spray in a condition to be most easily inhaled, as it reduces the irritating properties of the medicament to the minimum; the air-pump and air-chamber enable the operator to produce a strong or a weak constant current, which, by means of the cut-off, can be intermitted at will; and the apparatus is compact and portable.



Miscellany.

Memorial Notice of Dr. William H. Dudley, from the Council and College Faculty of the Long Island College Hospital.—The sudden and unlooked-for death of Dr. William H. Dudley, president of the collegiate department of the Long Island College Hospital, has taken from it its earliest and life-long friend. Associated with its inception and intimate with its various struggles, he lived to see it take rank with the foremost medical colleges of the land. It falls to few men to project a great educational institution, to watch its sure and steady development, and in the ripeness of years to look with just pride upon its assured influence in the community. Yet this was Dr. Dudley's labor and his reward. Committed to a principle in medical education and convinced of the feasibility of its practical application, he had a comprehensive grasp of the means to be used, and devoted himself assiduously to the result. Intimately acquainted with the working of the various departments of the institution (because the constructor of the general scheme), during all his life he was constantly observant of its work. From the choice of associates in the conduct of the College Hospital and Dispensary to the last details of the routine work, in each he was watchful, earnest, and untiring. A common sympathy with the institution was the open door to his enthusiasm and regard.

And he lived to the fulfillment of his hopes and the appreciation that his labors were rewarded by success. Measured by the spirit and the work of kindred colleges, he lived to see the Long Island College Hospital the peer of any. He lived to see its cardinal principle adopted as the correct idea in medical education. He died as few pass away, in the fullness of years, with his life-work complete.

His associates in the Council and the College Faculty unite in this testimony of regard for his faithfulness to principle, his purity of motives, and his heroism in endurance; and offer this tribute of admiration over his well-spent and honorable life.

[Signed]

J. W. Hyde, M. D.,
A. Hutchins, M. D., } Of the Council.
J. S. Wight, M. D.,
J. A. McCorkle, M. D., } Of the Faculty.

THE NEW YORK MEDICAL JOURNAL, November 13, 1886.

Original Communications.

THE EFFECTS OF DISEASES OF THE NASAL PASSAGES ON OTHER PORTIONS OF THE RESPIRATORY TRACT.*

By THOMAS R. FRENCH, M. D., Brooklyn,

CLINICAL PROFESSOR OF DISEASES OF THE THROAT AND NOSE IN THE LONG ISLAND COLLEGE HOSPITAL.

Nasal disorders, as ætiological factors in the production of diseases in or symptoms referable to other parts of the body, have received so much attention of late that our president, believing that a discussion of the subject would be of interest to the general practitioner, has requested me to bring it before you this evening.

The subject in all its bearings would be too great for an evening's discussion, and I will therefore confine my remarks to the effects of diseases of the nasal passages upon other portions of the respiratory tract.

There are three ways in which diseases of the nasal passages may give rise to disorders in other parts of the respiratory apparatus: 1. By catarrhal discharges. 2. Indirectly by causing the habit of mouth-breathing. 3. By reflex irritation.

By Catarrhal Discharges.—The anatomical arrangement of the nasal passages is such that, for the most part, the products of inflammatory processes in this region are drained off into the cavity of the pharynx. The secretions flow downward and backward and collect upon the posterior surface of the soft palate. This structure is raised in the act of swallowing, when the collections are wiped off upon the upper portion of the posterior pharyngeal wall, and from that situation they flow downward to the pharyngeal orifice of the œsophagus. During quiet respiration the arytenoid cartilages and the tissues lying between them, constituting the posterior wall of the larynx, lie flat against the posterior pharyngeal wall. The upper edge of the posterior wall of the larynx is pressed closely against the pharyngeal wall, and so diverts the stream of mucus or muco-pus from the pharynx into the cavity of the larynx.

In October, 1880, I read a paper before the New York Laryngological Society on the relation of nasal catarrh to chronic catarrhal laryngitis. In the discussion which followed, the members who spoke to the paper stated that it had not before occurred to them that nasal discharges found their way into the laryngeal cavity. To prove that this does take place, I described an experiment which I had made upon twenty-five subjects, and which consisted of applying a solution of Prussian blue to the posterior wall of the pharynx, just behind the velum, in sufficient quantity to flow slowly down the membrane. In all but two cases, within a half-hour after the applications were made the laryngoscope disclosed the fact that some of the colored mixture had found its way into the laryngeal cavity. As this mixture had to travel the same pathway as that taken by the secretions dropping from the back of the nose, no more conclusive demonstration could be had to show that nasal discharges do get into the larynx. The discharges from the mucous membrane of the nasal passages, when the seat of catarrhal inflammation, are of an acrid nature, and their prolonged contact with normal mucous membrane becomes sufficiently irritating to cause inflammatory processes of like nature. The discharges are at times so copious that a continuous stream of muco-pus can be seen extending from the posterior wall of the pharynx over the inter-arytenoid tissue into the larynx. In many instances a broad and well-defined strip of diseased membrane marks the pathway of the discharges from the posterior nares to the œsophageal opening, and from thence over the arytenoid cartilages down the posterior wall of the larynx to the vocal bands. Pharyngeal and laryngeal catarrh are, therefore, common results of catarrhal inflammation of the nasal mucous membrane.

The question may now occur to you, If nasal discharges find their way into the larynx, why may they not continue their course downward to the bronchi and excite a bronchitis, and eventually pulmonary phthisis? This is a question in dispute. While I do not deny the possibility of such a relation as cause and effect, I am of the opinion that it rarely if ever occurs. Nasal catarrh is almost invariably present in pulmonary phthisis. This is unquestionably the result of the impaired vitality due to the constitutional disorder. The same influences which predispose to the development of pulmonary disease are exerted in the production of catarrhal inflammation of the upper air-passages. Nasal discharges find their way into the larynx, and in some instances a short distance into the trachea. The mucous membrane lining the trachea is highly sensitive and intolerant of the presence of irritating discharges. Chronic catarrhal inflammation is not apt to extend except as a result of irritation from its discharges, and, as the discharges from nasal, pharyngeal, and laryngeal catarrh do not get far into the trachea, it is difficult to understand how a chronic nasal catarrh can ever act directly as a cause of bronchitis. The two diseases may co-exist and result from independent causes, or the catarrh of the upper air-passages may be caused by the irritating discharges coughed up from below. There can be no doubt that stenosis of the nasal passages, by giving rise to the habit of mouth-breathing, assists in bringing about a depraved condition of the body as the result of which phthisis may be developed, but I believe it quite unlikely that even such a condition can act directly as a cause of phthisis.

Indirectly by causing the Habit of Mouth-breathing.—The nasal passages, besides being the seat of the sense of smell, serve to warm, cleanse, and moisten the air inhaled into the lungs. If they become obstructed, respiration must of necessity be carried on through the mouth. Under these circumstances the air is not sufficiently warmed, filtered, or moistened to be deprived of its irritating qualities.

The continued irritation from dry, cold, and unfiltered air upon the mucous membrane of the upper air-tract soon results in the establishment of catarrhal inflammation, the parts most affected being the tongue, pharynx, and larynx. During the process of mastication, respiration is greatly interfered with, perhaps suspended. The tendency is, therefore, to swallow the food as quickly as possible, in order to permit free respiration through the mouth. The food being imperfectly masticated and insalivated, greater labor is required of the stomach than it is capable of performing with ease. Dyspepsia is therefore the natural consequence.

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* Read before the Brooklyn Pathological Society, March 25, 1886.

The fact that great general improvement usually occurs after nasal respiration has been re-established, through surgical or other interference, proves that the habit of breathing through the mouth interferes with general nutrition. The subjects of this habit are usually anæmic, spare, and dyspeptic, though it must be stated that occasionally the throat is apparently the only part of the body which suffers. The throat is always the seat of catarrhal inflammation in subjects who rely upon the mouth for respiration.

By Reflex Irritation.—Irritation of the mucous membrane of the upper air-passages frequently gives rise to various reflex phenomena. Irritation of the nasal passages may cause spasm of the glottis, though when the mucous membrane covering the laryngeal muscles is irritated the spasm may not occur. The introduction of the laryngoscopic mirror or the application of astringent solutions to the fauces may also cause laryngeal spasm. It is therefore not unlikely that some disorder of the nose or pharynx may occasionally act as the exciting cause of laryngismus stridulus in children.

Cough may occur as the result of irritation of the nasal cavities by means of a probe, or from the presence of a foreign body, morbid growth, or swollen mucous membrane. The susceptibility to irritation varies. The slightest touch is sufficient to cause cough in some cases, while in others it can not be produced by any amount of irritation. That *bronchial asthma* may be caused by diseases of the nasal and pharyngeal cavities no longer admits of doubt. Voltolini, in 1871, was the first to call attention to this fact by recording a case of asthma resulting from the presence of polypi in the nasal cavities. It has since been demonstrated that swelling or hypertrophy of the mucous membrane of the nose and of the glandular tissue in the pharynx may also excite asthma and cough. There exist in the nasal cavities sensitive areas which, upon being irritated, may excite reflex phenomena.

The positions of the sensitive spots vary somewhat in different individuals, but, as has been pointed out by Dr. Mackenzie, of Baltimore, they are most marked and constant in the posterior portions of the cavities. This observer believes that the most sensitive area is located in the lower posterior portions of the nostrils. Diseased conditions are present in this region much more frequently than in the superior posterior portion of the nares, but I have observed that, when the upper portions are subjected to irritation, from pressure caused by the presence of nasal polypi, the reflex symptoms are quite as marked. In a case of nasal polypi in which the rhinoscope showed the growths to be situated in the upper portions of the nasal cavities and confined to those portions, the asthmatic symptoms were quite as severe as when the lower portions of the canal are the seats of irritation. But I have not yet seen a case of reflex cough or asthma dependent upon a pathological process in the nose in which the brunt of the disease, or the greatest pressure, was not borne by the posterior portions of the nasal canals. In some cases small polypi or a moderate amount of thickening of the tissues in this situation are sufficient to cause reflex manifestations, while in others no amount of irritation or disease is capable of producing them.

The following case will serve to illustrate the severe reflex symptoms which may be occasioned by the presence of polypi in the nasal cavities:

Dr. ——, a practicing physician in this city, consulted me in May, 1881, on account of severe asthma and cough from which he had been suffering for about four years. There was more or less obstruction to nasal respiration, which had existed for a long time prior to the development of the chest symptoms. The asthmatic symptoms were always worse at night. At times they were so severe that he was obliged to sit up for hours. At such times he had noticed that the nasal passages were completely obstructed. In the daytime, when he suffered the least, the nasal passages were comparatively free, but he was rarely able to depend upon them entirely for respiration. When he awoke in the morning he was short of breath, and, as soon as he got out of bed, was seized with a violent paroxysm of coughing. Attacks of coughing occurred frequently day and night. Blowing the nose or attempted deep inspiration would invariably excite cough. He had lost flesh and strength, and much of the time was unable to attend to his professional duties. Examination of the nasal passages revealed the presence of a number of large polypi. These were removed with the snare and forceps in several sittings. The removal of the growths from the anterior portions of the nares gave no relief, but, after the growths springing from the posterior portions of the passages had been detached, the asthmatic symptoms disappeared entirely, and the cough was greatly improved. In October last the doctor consulted me again, as the chest symptoms had begun to return. Careful examination failed to reveal the presence of a growth, but with a slender forceps I was successful in detecting and removing quite a large polypus from the posterior portion of the left naris. The asthmatic symptoms disappeared at once. The cough was not at all relieved for a week, but after that it gradually grew less, and at the end of a month had almost entirely disappeared.

As I have already stated, swelling or hypertrophy of the nasal mucous membrane may be the exciting cause of bronchial asthma. In recent cases the reduction of the swollen membrane is often followed by the most satisfactory results; but, in chronic cases of years' standing, even if originally induced by the nasal disorder, such treatment will, I believe, prove of but little if any value. I recently undertook the treatment of a case of chronic asthma, hoping that, by the removal of the apparently offending tissue in the nasal chambers, good might result, and also with the view of testing the value of local treatment of the nasal mucous membrane in such cases.

The patient, a lady, had had frequent attacks of asthma during the past ten or twelve years, averaging at least one attack a month. I found two large masses of hypertrophied tissue springing from the posterior extremities of the inferior turbinated bones, and, as during every attack they both became greatly swollen and completely obstructed nasal respiration, it seemed to me quite probable that they were the reflex cause of the attacks. I therefore removed both masses, and made a number of applications of the galvano-cautery to the swollen turbinated bodies. The attacks have since occurred as frequently and severely as before, though now nasal respiration is at all times perfectly free.

There are other reflex phenomena which may be excited by a pathological condition in the nasal passages. Prominent among these are redness of the tip of the nose, headache, and facial neuralgia. The proof lies in the fact that successful treatment of the nasal disorder is often sufficient to dissipate these conditions.

Until recently the disease known as "hay fever" or "hay asthma" was generally believed to be due to a peculiar idiosyncrasy as the predisposing cause, and the pollen of certain grasses as the exciting cause. Latterly, however, the writings of Daly, Roe, Allen, J. N. Mackenzie, Sajous, and Hack have thrown much new light upon this obscure disease. Most of these writers believe that the predisposing cause is a diseased condition of the nasal mucous membrane, associated with either central or peripheral nerve derangement, and that there is a great variety of exciting causes. It is maintained that, whether there is apparent disease or not, there is always hyperæsthesia of certain portions of the mucous membrane. These sensitive spots or areas vary somewhat in different individuals ; but, as I have already said, they are most frequently found in the posterior portions of the nares. Irritation of these sensitive spots causes vaso-motor disturbances, which result in swelling of the membrane, increased secretion, and perhaps some reflex manifestation. As has already been shown, pressure from morbid growths or swollen tissue in the nose may cause cough and asthma. It can, therefore, be easily understood that the asthma accompanying hay fever is caused by reflex irritation from the existing nasal disorder. For the production of a paroxysm of hay fever there must, I believe, be some structural change in the nasal mucous membrane, and a functional nervous derangement, which, however, is not well understood. These conditions being present, irritation being applied directly or reflected from neighboring or distant parts, the phenomena characterizing this disease are the result.

The pollen theory, it seems to me, is a plausible explanation of the fact that the great majority of cases of hay fever occur in the summer months, but it certainly can not account for the attack occurring regularly at a certain date. Functional nervous disturbance may possibly explain this feature.

Dr. Mackenzie, of Baltimore, is of the opinion that an attack may be occasioned by psychical causes, and describes a very interesting experiment to prove that such is sometimes the case.* It is further maintained that, as a proof that the cause of this disease lies in or is associated with the nasal mucous membrane, the removal or cauterization of the surfaces of the diseased membrane will certainly relieve and may cure the disease. The intemperate statements made in support of this treatment by some writers has, I understand, injured it in some quarters, for a number of cases reported cured have relapsed. Considerable time will be needed before the proportion of cases which can be relieved or cured by this method of treatment can be determined. My experience with it in the treatment of hay fever is limited to three cases. In one case there was great obstruction to nasal respiration, due mainly to hypertrophy of the inferior turbinated bodies. The treatment was begun three months before the expected attack, and consisted of the removal of a mass of hypertrophied tissue at the anterior extremity of the turbinated bone in the left naris, and twelve or fifteen applications of the galvano-cautery knife to the thickened tissue in both nares. This was sufficient to re-establish free and permanent nasal respiration. The annual attack was delayed a few days, and, so far as the nasal symptoms were concerned, was milder than usual ; but the asthmatic symptoms were more severe than any the patient had had. In the other cases the treatment consisted of making ten or twelve applications of the galvano-cautery. The results were quite gratifying, for the following attacks were milder than any either of the patients had had. It will be seen that destructive treatment, freely applied, did not bring great relief in these cases ; but it would be unreasonable to draw conclusions from these examples, for the reports of many writers of recognized ability show that much better results have been obtained from this method of treatment at their hands.

It is probable that the benefit derived from the use of destructive agents within the nasal cavities is due to the fact that the terminal nerve filaments are destroyed. For, if the paroxysms were due to hypertrophied tissue, this condition would have to be present in all cases of hay fever, and date back to the first attack. It is, however, much more likely that the swollen tissue is the result rather than the cause of the periodic attacks of acute inflammation. When hypertrophy exists, there can be no question as to the propriety of the application of destructive agents, if skillfully made by one who is experienced in their use ; but, when the nasal mucous membrane is in an apparently normal or only moderately congested condition, the destruction of the terminal nerve filaments in extensive sensitive areas by means of the galvano-cautery would, at the same time, involve the destruction of a large amount of glandular tissue. Whether the injury inflicted by this destruction would not more than overbalance the discomforts of an annual attack of hay fever is a question worthy of consideration.

Much has been written during the past few months regarding the use of cocaine in the treatment of hay fever. My experience with this drug would indicate that in many cases it is of value and affords great relief. In one case, in which the disease was at its height and asthma had been present for three days, the application of a 4-per-cent. solution gave prompt relief, and in forty-eight hours the asthmatic symptoms had disappeared.

In some cases, however, though temporary relief is obtained, the effects of the drug soon pass off, leaving the membrane in a more swollen condition than before it was applied. In such cases the temporary relief afforded does not compensate for the subsequent asthmatic distress occasioned by the increase of the swelling.

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* "American Journal of the Medical Sciences," January, 1886.

THE PHYSICS AND PHYSIOLOGICAL ACTION OF PNEUMATIC DIFFERENTIATION.

By ISAAC HULL PLATT, M. D.,
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(*Concluded from page 518.*)

In considering the phenomena connected with the circulation, we have been obliged to confine ourselves principally to the consideration of mechanical effects, disregarding in a great measure the influence of the nervous system. This is due to the inherent difficulties in dealing with the intricate problems which the latter presents; but, the action of the agents which we are considering being almost purely mechanical, it is fair to presume that their effects will be primarily mechanical, and, at all events, if our reasoning is correct, it at least shows the tendencies of these processes, and, so far as experiment is applicable to the subject, it shows our theories to be in accordance with the actual results.

Two statements are put forward by Dr. Williams and Mr. Ketchum of which I wish to speak, because I believe that they have done much to confuse the subject. The first is one especially dwelt upon in Mr. Ketchum's paper *—to wit, that, in some way which he fails to make clear, the effect of withdrawing a small amount of atmospheric pressure from the periphery of the body is radically different from that of adding an equal amount of pressure to the air communicating with the interior of the lungs, the former acting to expand the chest by a *vis a fronte*, the latter by a *vis a tergo*. A very brief examination of the subject will, I think, suffice to convince us of the error of this view. Under ordinary conditions of air-pressure, the thorax being at rest, the pressure about the body and within the lungs is exactly equal—namely, that of the general atmosphere. When an inspiratory effort is made, the thorax is enlarged; consequently a tendency to rarefaction is produced in the lungs, and air simultaneously passes in to equalize the pressure. On the other hand, when the thorax is contracted, a tendency to compression of the contained air is produced, and air passes out to equalize the pressure. If, however, the pressure of the air communicating with that within the thorax is rendered greater than that of the air surrounding the body, a new element is introduced, for the pressure of the air within the chest, not being fully balanced by the pressure on the outside, tends to expand it by pressing its walls outward, and it seems perfectly evident that it can make no difference whatever whether the inequality in pressure is produced by increasing the pressure of the air which enters the lungs, or by reducing that without. In either case the expansive force is the pressure of the air within the lungs. For, suppose the barometer to-day to stand at twenty-nine inches, and the respired air to be compressed to such an extent that it will raise the mercury column thirty inches. To-morrow the barometer may stand at thirty inches, and we will rarefy the air about the body until it will raise the column but twenty-nine inches. In both cases the pressure within the lungs will be the same—namely, the normal atmospheric pressure with the barometer at thirty inches; in both cases the pressure about the body will be the same—namely, one half pound to the square inch less. It is impossible to see where the conditions differ. That the thoracic walls can be sucked or drawn out by a force acting in front seems absurd when we remember that suction is merely the removing of a portion of the atmospheric pressure from one side of a thing and allowing the full pressure to exert itself upon the other; that it is not a *vis a fronte*, but a *vis a tergo*. To maintain that suction is a force acting directly to draw bodies after it, is, as a scientific proposition, on a par with the statement that nature abhors a vacuum. To put the matter beyond a doubt, I have reversed the breathing-tube of the cabinet, placing the subject of the experiment upon the outside, and compressed the air within the cabinet. The effects produced upon the residual air and upon the pulse, as well as the subjective experience of the person operated upon, were found to be identical with those obtained when he was within the cabinet and the pressure reduced to the same degree.

The other statement referred to is that a most important, if not the main, effect of the positive differential process is connected with the use of medicated sprays or vapors introduced into the air-passages with the respired air, the spray or vapor, as Dr. Williams and Mr. Ketchum contend, being carried to the alveoli of the lungs during inspiration, and there deposited by the compression of the air caused by the commencement of the expiratory act. It is maintained by Dr. Williams that in this manner the tubercular disease can be reached and treated locally by the deposition upon the diseased lung-tissue of an antiseptic fluid. I believe this view to be wholly unwarranted. Waiving the question whether a sufficient amount of an antiseptic introduced into the lungs to disinfect them would not prove extremely injurious or even fatal to the patient, let us consider whether its introduction can be effected if desirable. It is well known that under ordinary conditions it is extremely difficult to introduce spray to any great depth into the air-passages, for the reason that it tends to be deposited upon the walls of the pharynx and in the larynx and trachea. If it should reach the bronchi, the cilia, whose express office it is to prevent the ingress of foreign material to the lungs, would most effectually bar its farther progress. Dr. Williams maintains that by means of the positive differential process—that is, the form in which the air surrounding the body is of a less pressure than that entering the lungs—the tidal air and vital capacity are increased and the residual air diminished, and that therefore the spray will be carried *farther into the air-passages*. But we found the reverse to be the case; the residual air is increased owing to increased difficulty of expiration. Hence the spray would be carried into the air-passages to a less depth than under normal circumstances. The arguments offered to prove that the spray or vapor is condensed upon the walls of the air-passages to any greater extent than usual seem to me to be based upon manifest errors. In the first place, it is necessary to distinguish between sprays and vapors, which Dr. Williams and Mr. Ketchum do not. A spray is a liquid in a state of such minute subdivision that it will float for a short time in the air. A vapor is the gaseous form of a substance which, at the ordinary temperatures and pressures, is either liquid or solid. One is governed by the laws of liquids, the other by the laws of gases. As the gentlemen have described the process used by them, they employ a simple spray formed by a rapid current of air passing over the mouth of a tube filled with liquid. So far as this is concerned, then, the laws of vapors have no application to the subject. It is conceivable, however, and no doubt in a measure true, that, if a solution of a volatile substance is passed in the form of spray into an atmosphere warmed to the degree of the upper air-passages, a portion of that substance will be vaporized, and we shall have a true vapor to deal with. Furthermore they can, of course, if they see fit, vaporize the substance in the first place before introducing it, so that we shall be obliged to consider the action both of sprays and of vapors. The word condensation as applied to sprays is simply a misuse of terms. Condensation means passing from the gaseous state to the liquid, and a spray can not condense, simply because it is already liquid. It can, however, be deposited upon surfaces with which it comes in contact, simply by reason of its mechanical adhesion for them. This mechanical adhesion is not altered by differences in the atmospheric pressure, and, as has already been shown, under the influence of the process under consideration, the spray carrying inspired air penetrates the air-passages to a less depth than under normal conditions, and the deposition of the spray upon their walls will be lessened rather than increased. With a vapor the case is different. The inspired air being charged with a vapor, the vapor will to some extent pass below the level of the inspired air by the law of the diffusion of gases. This will be true under any circumstances, and it is not alleged, neither is it possible, that the differential process can make any difference with this diffusion; the only effect it will have will be that, the inspired air not passing so far into the air-passages, less vapor will be carried in. Now, then, is it true that, under a comparatively increased pressure of the respired air, the vapor will be condensed to a greater extent than under other circumstances? To determine this point we must take into consideration the laws governing the condensation of vapors. They are simply stated in Ganot's "Physics": "Condensation of vapors may be due to three causes—cooling, compression, or chemical affinity. For the first two causes the vapors must be saturated." That is to say, they must be in a confined space, and the space must contain so much of the vapor that it can hold no more without becoming liquid.

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* "The Physics of Pneumatic Differentiation," "Medical Record," January 9, 1886.

Now, it is clearly impossible that the space of the air-passages could be brought under the conditions necessary to produce condensation of a medicinal substance by either cold or compression; first, because it is not a confined space, and, secondly, because no such amount of the vapor of an irritating substance as would be necessary to produce saturation could be introduced without suffocating the patient. It is true that this space is saturated or very nearly saturated with the vapor of water, and it is upon this fact that Mr. Ketchum seems to base his argument; but, even if condensation of a portion of this vapor were to be accomplished, it would have no effect upon the vapor of the medicinal substance, for the laws of condensation act upon each vapor independently of the presence or absence of other vapors, and, in order that the vapor of the medicament should be condensed by either cold or compression, the space must be saturated with that particular vapor.

Even if it were possible that the air-space could be so saturated, it is impossible that compression could be applied by means of Mr. Ketchum's device, and of course cold is out of the question. All the compression which is applied to the air at the commencement of expiration is the slight amount necessary to overcome the resistance offered by the friction of the bronchial tubes and the narrow opening of the glottis, and, as neither of these can be affected by the differential pressure, that process can not change the result. Mr. Ketchum, in his paper on "The Physics of Pneumatic Differentiation,"* states that "manometric tests show that in respiration, under the circumstances stated, the expiratory effort is equal to a difference of 4·5 inches of the manometer." It would have been interesting if he had stated how he applied the manometer, as, in order to register the compression produced by the resistance of bronchial friction, it must have been in direct communication with the air below the bronchial tubes. Of course the result is an error, for the extreme force of a violent expiratory effort in a strong man is only sufficient to raise the manometric column four inches.† If, however, the compression of the air in the lungs were of any value, it could be produced easily enough without any apparatus at all simply by making a strong expiratory effort with the mouth and nose closed.

The first two causes of condensation, then, being excluded, it is evident that such condensation as does take place must be referred to the third cause—that of any chemical affinity the vapor may have for the mucous membrane or the fluid bathing it, including under that term that loose form of affinity which results in a solution. That some condensation does result from this cause is conceded, but that it is affected one way or the other by the differential pressure is neither claimed nor is it possible.

Dr. Williams, however, professes to have demonstrated by experiment that his medicinal substances are in some manner deposited in the alveoli. The experiments reported are: First, cinchonism has been produced by inhaling quinine. Second, symptoms of mercury poisoning have resulted from inhaling the spray of a solution of mercuric bichloride. Third, in a patient with an intercostal fistula, iodine and mercury were detected in the discharge therefrom, after the use of sprays containing them. Fourth, tracheotomy was performed upon a rabbit, and a cannula introduced which was connected with the breathing tube of the cabinet; air-pressure to the extent of nine tenths of an inch was removed from about the animal's body, and a mixture of China ink and water was sprayed into the tube for ten minutes. The autopsy showed pigmentation in the alveoli. In regard to the first and second experiments, some persons are very susceptible to the action both of quinine and of mercury; enough of the drugs to produce the symptoms may have been absorbed from the mouth, pharynx, and upper air-passages, besides which there is nothing to show that a portion of the respective drugs was not accidentally swallowed. In regard to the third experiment, it is very probable that the suppurating cavity communicated directly with a bronchus. Of the fourth experiment, it seems enough to say that the introduction of a spray into a tracheotomy tube in the throat of a rabbit is a very different matter from its introduction into the mouth of a man, to say nothing of the fact that the pressure used with the rabbit was so great that it was necessary to resort to artificial respiration to enable it to expire against the pressure, a condition totally different from any we would be apt to use with a human being.

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* "Med. Rec.," January 9, 1886.

† Foster's "Physiol."

To sum up, then, we have found that, by means of the differential process in its three forms, we can increase or diminish the difficulty of expiration or of inspiration; we can increase or diminish the tidal air, the vital capacity, the stationary air, and the residual air. We can to some extent control the amount of blood in the lungs, and consequently control pulmonary congestion and hæmorrhage, and we can raise or lower the arterial blood-pressure. It is hardly possible that such wide-spread phenomena can be induced without producing other and secondary results through the influence of the nervous system and otherwise.

The result of my experience and study has been to convince me that a large share of the benefit derived from the use of the cabinet is due to the reduction of congestion, and consequently of inflammation, in the diseased lung by the differential pressure, in very much the same way as a bandage will afford relief to an inflamed joint. In addition to this, undoubtedly the increased expansion to which the lungs are subjected, and the passive exercise which they are afforded, will do much to modify their nutrition and increase their vitality. The subject is worthy of more thorough and systematic study than it has yet received, which study will, I am sure, convince the profession, if this effort shall have failed to do so, that the theories of Dr. Williams and Mr. Ketchum are erroneous, and that the value of the pneumatic process must rest upon other grounds; in saying which I do not wish to be understood to disparage the apparatus which those gentlemen have placed before the profession—which I believe, if understandingly used, to be of great value—but only to urge the importance of placing the matter upon its true foundation.

In conclusion, I wish to express my acknowledgments to my friends Dr. B. F. Westbrook and John A. Barrett, Esq., of Brooklyn, for valuable aid in the preparation of this paper.

THE COMPARATIVE FREQUENCY OF ORGANIC STRICTURE OF THE URETHRA

IN THE WHITE AND COLORED RACES.

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During some years' practice among a mixed clientele of whites and negroes, a considerable portion of which was venereal, the writers have been struck by the comparative rarity of stricture of gonorrhœal origin among full-blooded negroes. Traumatic stricture, on the other hand, rare in the white race, is not infrequent in the negro; indeed, half, or nearly half, of all cases of stricture met with in the full-blooded negro is caused by traumatism. And, although the proportion of mulattoes to blacks is small among our clients, the majority of stricture cases recorded as "negro," on investigation, are shown to be in mulattoes or quadroons. This alleged immunity from stricture of gonorrhœal origin in the negro is, in our opinion, by no means due to any rarity of the causative affection—gonorrhœa.

The two races are probably equally obnoxious to the gonorrhœal poison. In fact, whether from carelessness, more frequent exposure, or greater vulnerability, as many (or more) negroes apply with gonorrhœa as whites. The negro is, then, we may conclude, *cæteris paribus*, more frequently infected. The course of gonorrhœa in the negro is undoubtedly milder and more amenable to treatment, yielding frequently to the simplest remedies.

The statistics subjoined are derived mainly from the records of the U. S. Marine Hospital at New Orleans and Cairo, Ill., a few of them being taken from notes taken by the writers while they were resident physicians at civil hospitals. They are recorded in detail, and some pains have been taken to verify the record from the original entry; and all doubtful cases have been expunged.

Although the number of cases presented is not large, the statistics are believed to be perfectly reliable.

The patients were all employed in the same avocation—working on vessels—and, as nearly as may be, under the same conditions of life, the whites, however, being under better average hygienic conditions than the negroes.

Table I.

Cases of gonorrhœa and stricture observed at the Marine Hospital, New Orleans, from 1881 to 1885.

	Gonorrhœa.	Stricture.	Approximate ratio.	Per cent.
Whites..................	298	68	1 to 4½	23
Negroes, including mulattoes.	154	12	1 to 12½	8

From this table we see that stricture of gonorrhœal origin occurs in a given number of cases nearly three times as often in the white as in the negro race. Assistant Surgeon E. C. Carter, U. S. A. (Columbia Barracks), has kindly furnished us the data for table Number II.

Fifteen hundred and seventy-six cases of all diseases in the white race gave one hundred and twenty cases of gonorrhœa—8 per cent. From these one hundred and twenty gonorrhœas fifteen strictures occurred—12·5 per cent.

In negroes, one hundred and twelve cases, all diseases, twenty-three gonorrhœas were observed—20 per cent. Of the twenty-three cases of gonorrhœa, one gave rise to stricture—4 per cent. To tabulate:

Table II.

	Cases of all diseases.	Gonorrhœa.	Stricture.	Ratio of stricture to gonorrhœa.	Per cent.
Whites...... ...	1,576	120	15	1 to 8	12½
Negroes..........	112	23	1	1 to 23	4

In Table II we have a larger number of gonorrhœas in the negro, as 20 per cent. negro against 8 per cent. white, and yet the strictures predominate in the white, as is shown by 12·5 per cent. white against 4 per cent. negro—about three to one.

The number of cases of gonorrhœa at Cairo, Ill., was not noted, which, of course, detracts from the value of its statistics for the present purpose. The opinion of the reporter is, however, that "as many gonorrhœas are recorded in negroes as in whites, but they are less obstinate."

Table III.

Strictures of gonorrhœal origin.
Cairo, Ill.

Whites	23
Negroes (not including mulattoes)	1
Mulattoes	3

Also five traumatic strictures are recorded at this port not included in the foregoing table—three among whites, two among negroes.

It will be seen that the mulattoes probably furnish a fair proportion of strictures recorded at New Orleans and elsewhere as "negro," yet their number at Cairo is insignificant as compared with the full-blooded negroes.

As bearing on this subject, the following table is submitted, compiled from the Reports of the Marine-Hospital Service for the past four years, and the medical records of this same service at this place (New Orleans). The number of cases embraced is sufficiently great, we think, to furnish some safeguard against accidental errors.

The subjects of the statistics of the Great Lakes are white men almost entirely. The statistics of the port of New Orleans and the Ohio and Mississippi Rivers are from a clientele of whites and negroes in the proportion of three to two as nearly as may be judged by the total number of cases of all kinds of diseases treated.

The proportion of negroes with venereal disease is, however, greater than this, as they are but little liable to malarial diseases, which furnish a large proportion among the whites; otherwise the diseases are strictly comparable, the kind of service being very much the same, short trips frequent, short stoppages ashore, high wages, and irregular work, almost the only difference—save climatic ones—being due to race.

Table IV.

	New Orleans	District of Ohio.	District of Mississippi.	District of Great Lakes.
Total number of all cases	8,116	20,380	18,368	33,082
" " " gonorrhœas	590	1,376	1,107	2,850
" " " strictures	52	127	106	352
Ratio of gonorrhœa to all diseases	14	15	16·5	13
Ratio of stricture to gonorrhœa	11·8	10·9	10·4	8

Average ratio of strictures to gonorrhœa in the first three columns, 10·9. This table shows the ratio of gonorrhœa to cases approximately the same in the first three districts, somewhat greater in the district of the Great Lakes, due probably to the number of cases being swollen in the former by malarial diseases. In every eight cases of gonorrhœa among whites there is one case of stricture. Taking the average, it requires 10·9 cases of gonorrhœa among the mixed clientele of whites and negroes to give one stricture. Supposing that the gonorrhœas are divided among the races in the proportion of two fifths negroes and three fifths whites—about the proportion of the races admitted for all diseases—and that every eight gonorrhœas among the whites furnish one stricture, as on the Great Lakes, a simple calculation will show that twenty-three gonorrhœas among negroes furnish one stricture; then, as eight to twenty-three, or three times as many strictures in the white as in the negro, gonorrhœas being the same.

So in Table I we get one to four and a half white as one to twelve and a half negro, or nearly three times as many strictures in whites as in negroes from a given number of gonorrhœas—23 per cent. as against 8 per cent.

Again we take Table II. We find one stricture to eight gonorrhœas in whites and one stricture to twenty-three gonorrhœas in the negro; again about three to one from a given number of gonorrhœas.

A combination of Tables I, II, and IV gives:

	WHITE.			NEGRO.		
	Gonorrhœa.	Stricture.	Per cent.	Gonorrhœa.	Stricture.	Per cent.
Table I	4½	1	23	12½	1	8
Table II	8	1	12½	23	1	4
Table IV	8	1	12½	23	1	4
Total	20½	3	16	58½	3	5⅓

Thus, in twenty and a half whites with gonorrhœa we get three strictures, while it requires fifty-eight and a half, or nearly three times as many, negroes to give the three strictures. The only table showing the proportion of gonorrhœas in white and colored is Table II, and here it is shown that it is as 8 per cent. to 18 per cent. in favor of the whites. The negro has the most gonorrhœas, but the fewest strictures.

For the information of the curious, we will say that no injections were used in treating the cases of Table No. II.

New Orleans, La., *September 17, 1886.*

ANÆSTHETICS AND GENERAL ANÆSTHESIA.

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The anæsthetics around which interest chiefly centers are ether, chloroform, and nitrous-oxide gas; these, then, will form the subject of this paper.

In these days of advanced civilization the higher nervous sensibilities of the nineteenth-century life render the administration of anæsthetics more necessary than they would have been among people less highly civilized than ourselves.

Anæsthetics are justified, not only in proportion to the magnitude of an operation, but they are equally justified in proportion to the dread the patient has of undergoing almost any operation. They also allow for the performance of more elaborate, prolonged, and careful operations—and to this may be added the certainty of diagnosis—than formerly; three great elements requisite for the performance of the latter are care, precision, and completeness.

General anæsthesia, according to Binz ("Archiv. für experiment. Pathologie"), is due to the power certain drugs possess of producing a kind of coagulation of the substance of the cerebral cortex; and H. Ranke ("Centralblatt") observes that it can not depend upon such a complete coagulation as admits of no further change, since the effects produced by anæsthetic agents are but transitory. Ranke further observes that the action of anæsthetics upon frogs first produces a condition in which no contraction can be induced in muscles by any kind of irritation applied to the motor nerves, though the muscular tissue itself reacts to direct stimulation, and the current in the nerves remains constant both in force and direction. In a later stage of anæsthesia the muscular tissue itself ceases to respond to the most powerful induction currents, though its proper electro-motor force remains unweakened; and, finally, at a still more advanced stage, the whole muscular tissue of the body passes into a condition of rigor.

Administration of Anæsthetics.—In many patients the administration of anæsthetics is dreaded as much in its anticipation as the subsequent operation itself, and in many others the very thought of it frightens them into declining necessary surgical interference.

Practice in the administration of anæsthetics, especially in the hands of the intelligent, makes perfect; every physician should therefore endeavor to make himself or herself conversant with the practical handling of this class of remedies, as they may at any minute be called upon to administer them.

In the administration of any special anæsthetic, it is to be supposed that the attendant is, or will make himself, familiar with the varying condition of the patient from the moment of commencing the inhalation until complete anæsthesia is obtained.

As a rule, the patient can be said to be completely under the influence of the anæsthetic when complete relaxation of the muscles of the extremities is present, especially indicated by flexing the elbow or knee joint; or by the listless dropping of either of the extremities when previously raised. Also when the cornea or ocular conjunctiva is insensible to irritation by finger touch, although I have observed the latter to occur frequently before the patient was completely under the influence of the anæsthetic.

In the giving of anæsthetics, the after-effects or after-consequences which so generally occur are frequently a source of discomfort to the patient and annoyance to the attendant and operator; if protracted, convalescence is more or less delayed and the success of the operation is occasionally vitiated.

These after-effects depend not alone upon the length and severity of the operation, but are influenced also by the idiosyncrasy and the previous dietetic and general treatment of the patient, and, I might add, by the mode of administration of the anæsthetic.

As to the treatment of patients previous to administering any anæsthetic, a light meal should be given them some three or four hours before the operation, and in persons more or less exhausted or very nervous, one half to a wine-glassful of whisky or brandy given a quarter or half an hour before administering the anæsthetic, will be found of great service.

Hypodermic injections of morphine, or opium in any form, should rarely be given immediately after an operation, and then only when pain is acute, as they are liable to increase the tendency to vomiting.

The means by which the dangers or risks attendant upon the administration of anæsthetics can be reduced to a minimum is in the intelligent consideration by one capable of considering them intelligently, and in no case should the administrator have anything whatsoever to do with the operation; also everything that could possibly be required in the event of accident occurring, should be in readiness beforehand. Finally, by choosing in every case the safest anæsthetic; first in order being ether; secondly, nitrous-oxide gas (minor operations only); and lastly chloroform, the latter being confined to exceptional cases only.

There can be no doubt that the heart, as also other parts of the system, is more readily influenced at times by impressions than at others, and particularly so in persons of nervous temperament, indicated mainly by palpitation—or some indefinable sensation about the heart.

Death under the influence of anæsthetics can rarely be attributed to shock, as the nervous system appears to be more strongly fortified against these paretic impressions than the heart. In the administration of anæsthetics, death may occur, aside from the anæsthetic directly, indirectly from the anæsthesia, or from the operation itself.

The relative merits of ether and chloroform, and I might add nitrous-oxide gas, as general anæsthetics have always occasioned deep interest, and many expressions of capable opinion among those of the medical profession. That a growing distrust of chloroform has been more generally manifested of late, and that ether has within the past ten years, especially in this country and Great Britain, made rapid strides, almost entirely superseding chloroform, is generally admitted; the hold of chloroform was so strong, especially in Great Britain and on the Continent, that nothing less than a continuous and overwhelming exposition of facts sufficed to produce an impression and to obtain for ether that which its greater safety and its proved convenience as an anæsthetic commended. In these pages I do not speak as an enthusiast on the subject of ether and to an extent of nitrous oxide, but rather as one calling attention to the dangers underlying especially the use of chloroform. I have no desire to depreciate the value of chloroform as an anæsthetic, but, considering the risk of life attendant upon its administration, and how many surgeons have been compelled to bear mournful testimony to its perilous effects, in contrast to ether, it is evident to me a surgeon takes upon himself a grave responsibility when he uses chloroform in preference to ether, unless circumstances did not admit of the latter being used, which happily is rarely the case.

The safety with which ether can be administered far more than compensates for the slight gain in rapidity with which a patient can be anæsthetized under chloroform—"safety is the watchword, not dispatch." In urging the adoption of ether almost exclusively as a general anæsthetic (except in obstetrical practice and where, as will be shown later on, the administration of nitrous-oxide gas in minor operations), the chances of fatal cases occurring are somewhat increased, not so much from the increase in the number of cases in which to be administered as from the fact of over-confidence with many, and a want of attention to the state of the patient while the latter lies under its influence.

Ether.—The priority of discovery of the anæsthetic properties of ether and general anæsthesia is still an open question, being claimed by several persons. In an able and interesting monograph on the subject of the discovery of anæsthesia by the late Dr. J. Marion Sims, published in the "Virginia Medical Monthly" for May, 1877, the credit is given to Dr. Crawford W. Long, of Athens, Ga., he having—on March 30, 1842, at Jefferson, Jackson County, Ga.—been the first to administer it in an operation for extirpation of a tumor of the neck.

Dr. William T. G. Morton's, of Boston, Mass., claim to its actual discovery lies in the fact of a paper by Dr. Henry J. Bigelow, published in the "Boston Medical and Surgical Journal," November, 1846, calling attention to Dr. Morton's discovery and its use, under the patented name of "Letheon," at the Massachusetts General Hospital several weeks previously; ether and general anæsthesia then became a fixed fact. As Dr. Long failed to publish his results until 1849, unfortunately for him, the fact of the matter would be therefore, as stated in the words of Dr. C. T. Jackson, of Boston, Mass., when visiting Dr. Long in 1854, "the advantages of priority in date and in the first use of ether as an anæsthetic, and in that the discovery of general anæsthesia, lies with Dr. Long; while the advantage of priority of publication, thus giving its results and practical demonstration to the world three years earlier than Dr. Long, lies with Dr. Morton."

In the administration of ether the patient should be requested to take long and deep inspirations, the administration to be slow at first and the inhaler held a short distance from the face, in order to prevent a sense of choking or feeling of suffocation; after a minute or two the face-piece or apparatus should be pressed gradually to the face so as to cover the nose and mouth accurately. The sense of hearing will greatly assist in enabling the attendant to judge of the character of the respirations. Impending nausea and vomiting while under its influence frequently indicate a returning consciousness, which may be prevented by pushing the anæsthetic and keeping the patient well under its influence.

The readiness with which a patient can be kept for a prolonged period under its influence is certainly remarkable. In one case at an operation for strangulated inguinal hernia at St. Elizabeth's Hospital, this city, I administered it steadily for four hours; in another instance, following shortly upon the former, at the same hospital, at an operation for extensive ventral hernia in which ten inches circumference of the abdominal wall was excised, it was administered for four hours and twenty minutes, no doubt two of the longest periods on record, both patients passing through these ordeals without the least dangerous symptoms, although in the latter case the patient weakened considerably toward the close of the operation, but ultimately recovered.

Speaking from quite an extensive personal experience, having administered it in several hundred cases, a large proportion of which were extended and capital operations, I have yet to meet with what would be termed a dangerous case; true, more or less obstruction to respiration occurred in several cases, due to excessive secretion of mucus and saliva, or to irritation of a previous bronchitis; to falling back of the tongue, and to sudden vomiting; but by traction downward and forward upon the tongue, with the head placed slightly below the level of the body, all danger was averted.

As regards the statement by Dr. W. M. Thallon, of Brooklyn, in his article on "Ether Narcosis" ("N. Y. Med. Jour.," Jan., 1886), that more trouble or danger was experienced when the patient was anæsthetized in Sims's position than when on the back, I would state in reply thereto that if the attendant while administering the anæsthetic will take particular pains to hold the angle of the lower jaw forward and upward with the fingers, he will not experience any trouble or danger in the least, and his mind can be set at rest as regards the safety of the patient.

The fact that at times patients express a previous dislike to its taste and odor should have no weight as compared to the dangers of chloroform, although the latter is much the sweeter.

As regards the after-effects of ether, nausea and vomiting, which are less protracted than after chloroform, transient mania or stupor, and symptoms of intoxication, they are but temporary and are best left to themselves. If the vomiting should be protracted, which is rarely the case, a host of remedies may be made use of which require no special mention on my part.

The principal danger apprehended in the administration of ether is obstruction to respiration, or a superficial or irregular performance of the act of respiration; cardiac syncope or paralysis occurring subsequently, consequent upon the arrest of respiration; this gradual cardiac failure or paralysis indicating practically the great difference from the sudden cardiac paralysis observed in cases of chloroform. This obstruction to respiration is due to several causes: vicarious (temporary) bronchitis from collection of mucus and saliva, presence of vomited matter in the larynx, falling back of the tongue, and finally spasm of the glottis. By strict attention to the administration of the ether and the state of the patient while under its influence, these dangers are happily of rare occurrence; should they arise notwithstanding, they can be treated in the manner previously described.

In England the idea prevailed for a long time that the American method of administering ether was a smothering one, in which the patient was forcibly drenched with a large amount from a sponge or towel, this method being, as they stated, rapid and effective, and about as pleasant to the patient as being drowned. Comment is unnecessary.

Although organic lesions of the kidneys no doubt increase the risk of etherization, they should not preclude its administration when necessary; the knowledge of such lesions, however, should enforce caution and due care during its administration, as uræmic coma has been known to take place. Quoting from a paper by Dr. J. B. Roberts ("Med. and Surg. Reporter," Philadelphia, xlvi), after a searching inquiry into the reported fatal results and dangers following the administration of ether in patients having renal complications, he concluded that fatal results rarely follow, and that but comparatively slight risk is attached to its administration when due care and caution are exercised. Personally I can recall no death said to be or thought to be due to uræmic coma while under the influence of ether.

In many instances patients have been previously anæsthetized by chloroform, ether being given subsequently. I can recall one instance from personal knowledge, and could quote several others, in which the patient died while under their combined influence. I should strongly advise any one contemplating such alternation to desist from its practice.

The combined inhalation of ether and nitrous-oxide gas has been recommended, it seeming to possess the advantages of rapidity of action with safety, and occasioning less ill effects. The precise conditions induced in the human organism by ether administered to complete insensibility are identical with those seen in the lower animals after death from ether—the blood fluid, arterial blood dark, mucous membranes injected, and the pia mater of the brain and cord intensely injected, the cerebral mass itself remaining white and bloodless.

That ether may kill is undeniable, but that it will cause death when properly and carefully administered is exceedingly improbable.

The signs of danger are evident in every case in which ether is doing harm. Many cases of reported deaths from ether inhalation as quoted by Bigelow and Snow, and collected by Dawson ("Brit. Med. Jour.," 1878, i), are considered by them very doubtful that ether was the cause of death.

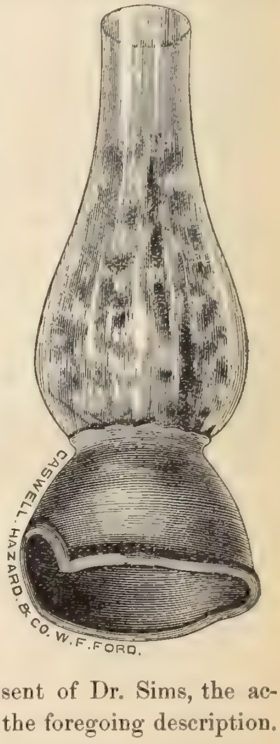
In the report of a committee of the Boston Society for Medical Improvement, as far back as 1861, "upon the alleged dangers of ether," it is stated that "there is no recorded case of death attributed to ether which can not be explained on some other grounds equally as plausible."

An assertion, or rather opinion, expressed by Jonathan Hutchinson ("Brit. Med. Jour.," 1880, ii), that "to the use of complicated inhalers the occasional ill effects of ether are due," is no doubt frequently the case. A description of a very simple inhaler, which I have been in the habit of using, is presented further on.

In a list of some forty published cases where death was said to have depended upon the use of ether, examination showed that in eight cases only did death occur during the operation, or was caused directly by the ether. As proof of this statement, I will instance one special case which will about cover the ground of the remainder. In the "Lancet," June, 1886, appears an article by my friend, Dr. W. Moxon, of Guy's Hospital, London, in which he attributes a death from thrombosis of the coronary (left?) artery to inhalation of ether three weeks previous to the patient's death; furthermore, he adds that this thrombosis, situated about two fifths of the way toward the apex of the heart, was, so far as his experience enabled him to judge, about three weeks old, being thus the period that had elapsed since the administration of the ether; granted, as he further adds, it is therefore obvious that the clot formed about and probably at the time of the administration of the ether. I would ask the question, May it not have formed a number of days previous, or several days subsequent, to its administration? There were no positive facts to warrant the assumption, so strongly set forth, that the thrombus was formed by the ether directly, or even indirectly, no age of the patient being given. It occurs to me, after a digest of the article in question, that the death is unnecessarily and, in a given sense, wrongfully attributed to the inhalation of ether.

Of my own personal knowledge I could mention two deaths while under the influence of ether, both deaths having been attributed to the ether, when in fact both were due to the grossest carelessness and over confidence on the part of the administrator, the latter paying considerably more attention to the operation and surroundings than to the anæsthetic and the patient.

The apparatus or inhaler with which I have generally administered ether is an exceedingly simple but efficien one, devised by Dr. H. Marion-Sims some twelve years ago It is composed of an ordinary conical glass lamp-chimney, wide at the mouth, to which is attached a flexible rubber mouth-piece, such as is used by dentists, two portions being cut out at the larger end for the nose and chin, so as to have it approximate closely to the face; within the glass cone is placed a porous bathing sponge upon which the ether is sprinkled; this porosity allows for the entrance of sufficient atmospheric air, as also the free exit of expired air through the distal opening in the cone, thus preventing any irritation from the carbonic acid exhaled, the latter remaining merely for a single respiration, as the expired air is blown clear through the porous sponge and cone with each expiration. The advantages of this very simple inhaler are that but a very small quantity of ether is required to anæsthetize the patient; there is no danger connected with its use; it is easy to handle, very easily cleansed, and ready for use at a moment's notice. I have had prepared, with the consent of Dr. Sims, the accompanying woodcut to illustrate the foregoing description.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Chloroform.—Here again, as in the case of ether, regarding the discovery of the anæsthetic properties of chloroform, priority of publication is said to be the first law. In accordance with this view, the anæsthetic properties of chloroform were discovered by Sir James Y. Simpson, of Edinburgh, in 1847, although in the "Lancet" of June, 1877, Dr. M. C. Furnell, Surgeon-General of Her Majesty's Indian Service, claims priority of discovery in so far that under the name of "chloric ether" he had administered it at St. Bartholomew's Hospital in numerous operations for Sir William Lawrence some four months previous to the publication of its anæsthetic effects by Sir James Y. Simpson.

As regards the administration of chloroform, the rule is well-nigh established in this country that chloroform should rarely if ever be administered for the purpose of producing general anæsthesia, its absorption being so rapid that practically it reaches the heart in an almost concentrated form, thus accounting for its depressing effects and death by cardiac paralysis. Its administration needs very careful watching, as many patients breathe as little as they can, thus causing more or less delay in the rapidity of anæsthetization; but when they begin to breathe freely they often make up for time lost by inhaling deeply.

The towel or handkerchief generally used to administer chloroform should never be pressed close to the nostrils, but should be held from one to three inches away, allowing for the inhalation of atmospheric air with each respiration, the administrator being certain then that the patient is not receiving a dangerously concentrated atmosphere of chloroform. Want of knowledge or attention to this rule frequently leads to and has been the cause of disastrous results.

There is infinitely more danger from carelessness in the administration of chloroform than of ether, signs of danger rarely showing themselves in the former, fatal syncope being so rapid.

As a general rule, the heart is depressed in proportion to the strength or quantity of the chloroform inhaled, and therefore the sooner the lungs are supplied with a reviving atmosphere, the greater the chances of restoring the patient from the effects of an overdose.

The countenance and pulse especially should be watched with greater vigilance than the respiration, they giving a true indication of the state of the patient while more or less under its influence.

In a paper read before the British Medical Association several years ago, by John Chiene, Esq., professor of surgery in Edinburgh University, he makes the remarkable statement that "no attention is to be paid to the pulse, it being the last thing that stops, for when the stoppage of the heart's action is due to the drug, the patient is dead; attention should be directed therefore mainly to the breathing." The pulse being an indicator of the heart's action, his statement to disregard the pulse is not in keeping with facts. How are we to inform ourselves of the proper action of the heart, or of gradual failure of the heart's action, except by attention to the pulse? If, as has been proved time and again, the heart is first affected in chloroform narcosis, especially indicated by facial pallor, the breathing subsequently, death (when occurring) being due to paralysis of the heart, why should we at this late date be told to "specially watch the breathing and let the pulse (and by that the heart) take care of itself?"

The supposed more rapid action of chloroform is at the present time to a great extent an error, as in the majority of cases the action of ether is certainly as rapid as chloroform; such at least has been my personal experience.

It is well known that deaths from chloroform have not infrequently occurred in connection with minor operations; it is also well to bear in mind the fact that death from chloroform inhalation has most frequently occurred in the first few minutes of inhalation, a warning to be heeded in the very beginning of its administration.

In a retrospect ("Brit. Med. Jour.," December, 1872), in which earnest attention was directed to the administration of chloroform, the conclusion was arrived at that "materials of distressing amplitude were afforded for the indictment of chloroform as a deadly and dangerous agent of anæsthesia."

As to signs of danger in chloroform administration, a sudden pallor of the face, ashen lips with feeble or arrested pulse, indicating cardiac failure or syncope, are the most prominent; to these may occasionally be added a more or less dusky hue of the face from asphyxia, and a want of sensitiveness of the pupil to light.

In persons with naturally weak heart, fatty degeneration, etc., or in the aged or prematurely aged, chloroform is contra-indicated, and should never be used.

The after-effects in the administration of chloroform are similar to ether, except that there is more or less depression or faintness, the vomiting being also generally more prolonged.

The many cases of recovery from impending death due to chloroform inhalation depend, no doubt, more on the quantities administered than the difference in the patients, and many of the deaths under its administration might have been averted had there been less chloroform in their lungs when their dangerous state was observed.

In sudden cardiac syncope during chloroform inhalation, in which a condition of cerebral anæmia also exists, the best and most certain method of resuscitation or reanimation is that sanctioned by Nélaton, as described by Dr. J. Marion Sims in a paper read before the British Medical Association in 1874. This procedure is by inversion of the body, in which the head and chest are instantly lowered, while the lower half of the body should be elevated so as to have the full force of the circulation in the direction of the heart and brain, this inversion being alternated by return to the horizontal position, artificial respiration being zealously maintained during the whole time.

Nitrite-of-amyl inhalations and hypodermic injections of ether and ammonia also act as rapid cardiac and cerebral stimulants.

In glancing over the published list of deaths from the administration of chloroform, can it be said justly that these fully authenticated cases cover all the deaths by its use? May we not infer that probably double the number, if not more, were not reported as due to such (intentionally or otherwise), but were reported as deaths due to sudden cardiac syncope or cardiac disease? What, also, may be said of those cases, almost innumerable, in which the patient was, to use the word, snatched from the brink of death by the timely administration of antidotes or means of resuscitation? In view of this, how there can be any question as to the selection of, or any hesitation in adopting generally, ether in preference to chloroform, is answered only by the aversion to deviate from the old teachings or customs.

What is called the "A-C-E Mixture," consisting of alcohol one part, chloroform two parts, and ether three parts, has been and is still somewhat used in Great Britain in preference to ether or chloroform singly. It is said to do away with the disagreeable features of ether and chloroform when given each separately, as also the greater risk of the latter.

What has been termed "mixed narcosis" is stated to be especially serviceable for operations about the mouth and jaws, where it is of importance that blood should not trickle down the trachea or flow down the œsophagus into the stomach, the latter causing subsequent vomiting, the patient spitting out the blood at will when requested to do so, after accumulation of blood in the posterior pharynx. This method of producing general anæsthesia, discovered by Nussbaum, of Munich, lies in giving the patient, as soon as placed upon the table, a hypodermic injection of half a grain of morphine, and immediately thereafter administering chloroform, when, after several minutes, the operation may usually be begun; the chloroform is to be renewed only at intervals thereafter.

Patients are said to lose all sensibility to pain, but evidently retain a considerable degree of consciousness and control of voluntary movements. Though unfamiliar with it, it seems to me this practice of mixed narcosis is a very dangerous one, deserving of but little favor.

The question of the administration of anæsthetics, especially chloroform, in obstetrical practice is at present generally admitted to be a great boon to parturient women, statistics showing that, when judiciously administered, little if any danger need be apprehended from the anæsthetic itself.

Its use is especially indicated in obviating the excessive and, at times, excruciating pains occurring in the latter part of the first and during the second stage of labor, which so exhaust the mother, and which may be, perhaps, fatal to the child. It should be administered during the pains, and only while they last, and then only to semi-unconsciousness. It is never indicated, and should never be given, in the third stage of labor, as the relative safety of chloroform ceases with the birth of the child.

The presence of cardiac or pulmonary disease is, in accordance with later observers, said not to be a contra-indication to its use at full term.

Nitrous-oxide Gas.—It has but recently been stated by Dr. Lafont, in "La France médicale," that the use of nitrous oxide frequently produces functional troubles which may cause serious dangers, principally in the physiological and diathetic state; temporary glycosuria, reappearance of epileptic symptoms, and appearance of albuminuria in a case of mitral insufficiency, are mainly given as the protoxiazotic anæsthetic effects. These are the first instances in which attention has been called to these peculiar consequences, and to my mind they in no way contra-indicate the use of nitrous oxide, no death being reported from above by the author of the paper; therefore no especial importance should be attached to them.

The anæsthetic properties of nitrous-oxide gas were discovered and first introduced by Dr. Horace Wells, of Hartford, Conn., December 11, 1844, in the extraction of teeth.

For operations requiring only a few minutes this gas is undoubtedly the best anæsthetic, being safe, rapid in its action, and effectual. It is not unpleasant to the patient to inhale, and much fright and mental distress is thus avoided. Recovery is usually prompt and complete, after-discomfort or ill effects being rather uncommon.

I have assisted in numerous gynæcological operations and cases for diagnosis, where this gas has been administered, even as long as half an hour at a time, without the least unpleasantness during the operation or in its after-effects. I am also aware of Dr. H. Marion Sims having administered it in a number of cases of ovariotomy for as long a period as an hour and fifty minutes, the only danger in these cases being a gradual cyanosis toward the close of the operations, due to more or less asphyxia. It has also this advantage, that the surgeon can generally within a few minutes proceed with the operation or in diagnosis, and not be kept waiting for from ten to twenty minutes. With so many reasons in its favor that, aside from dentistry, it will ever come into general use for surgical operations is doubtful, because of the cumbersome nature of the apparatus and the difficulty in conveying it from place to place.

In hospitals, where operations occur daily, its use as regards its rapidity of action, combined with its safety and rare unpleasant after-effects, would, in minor surgical operations and in matters of diagnosis, especially lead me to recommend it and augur for it a brilliant future.

In this respect I might state that the idea prevailing at one time that, because of the exclusion of all atmospheric air during the administration of nitrous-oxide gas, the most perfect asphyxia was produced, being therefore a retrogression in science, has proved entirely fallacious.

A comparison from past and present experience as to the relative safety of ether, chloroform, and nitrous oxide, can be adduced by the following statistics of deaths obtained from various sources, and which are thoroughly reliable. From the "Annual Report of the Registrar-General of Great Britain" the following statistics were obtained:

Deaths relatively in England, 1881.

	Males.	Females.	Total.
Chloroform	17	4	21
Ether, etc. ?	5	2	7 ?
Nitrous oxide	..	..	..

It will be seen here that the deaths from ether are proportionately large, that being due to including the various other anæsthetics under its head, indicated by the affix “etc.”[*] A comparison with the year following, as also 1884 and 1885, indicates the true relative deaths.

Deaths relatively in England, 1882.

	Males.	Females.	Total.
Chloroform	22	8	30
Ether	1	..	1
Nitrous oxide	..	..	..

Deaths relatively in England, 1884.

	Males.	Females.	Total.
Chloroform	17	11	28
Ether	2	2	4
Nitrous oxide	..	..	..

Relative Deaths in England, 1885.—From chloroform, 12 deaths; ether, 3; nitrous oxide, 0. These statistics for 1885 are unofficial, having been collated by Dr. E. H. Jacobs. To use his own words, “the casualties from ether are but three, a small record considering the general use of ether in English surgical centers.”

In the year 1883 the deaths from chloroform and ether were combined, showing 29 deaths from both—21 males, 8 females—while one death in this year was attributed to nitrous-oxide gas. It seems to me unfortunate that the relative deaths were not separate as in other years.

In 1872, in less than five months there were 10 deaths from chloroform. In 1869, 11 deaths; 1868, 14 deaths. From 1863 to 1868 the annual average of deaths from chloroform was 9·5.

Reliable statistics of deaths from anæsthetics in this country are not obtainable, no thorough record of such being made.

Referring to ether, statistics estimated by Turnbull, out of 34,980 inhalations of ether in Philadelphia up to 1878, no primary death was recorded, and but one secondary death.

The statistics of Andrews give but 4 deaths in 92,815 inhalations of ether.

In Scotland and Ireland deaths from anæsthetics are not tabulated under their respective heads, being reported as deaths from suffocation or asphyxia. Taking in consideration the fact that ether is used fully as often, if not more so than chloroform, in England, the contrast in the results of the published statistics as above is evident; the only conclusions to be drawn from them is that surgeons should well weigh this important consideration, and *not* continue the use of chloroform in the face of these facts, or without asking themselves gravely whether they are doing rightly in exposing the patient to the excess of danger to life which is involved in the administration of chloroform.

In a discussion invited by the “British Medical Journal” a number of years since, and which was ably maintained by such men as Clover, Howard, Cowper, Butlin, Alexander, and many others, testimony was furnished and concurred in with remarkable unanimity which established beyond doubt the far greater safety of ether over chloroform.

Of those still using chloroform, many continue so merely from habit alone, especially those of foreign nationality, graduates of European schools of medicine; while others, anomalies as they may be termed, have no good reason upon which to base their continuance.

These I would refer to this paper, and strongly advise them in addition to discontinue its use at the earliest moment, since its dangers, as previously pointed out, are many, and its advantages few.

In conclusion, it can be correctly affirmed that ether, though not absolutely perfect, is by far the safest general anæsthetic.

In a word, ether renders the work of an anæsthetist light instead of anxious, and the few disadvantages under which it labors are amply compensated by the greater security it confers; there should therefore be no hesitation in the minds of all surgeons as to the better and safer general anæsthetic.

A CASE OF ANGINA PECTORIS.

By LOUIS ASTA-BURUAGA, M. D.,
HOUSE PHYSICIAN, ROOSEVELT HOSPITAL.

In looking over the history books of the Roosevelt Hospital, I was struck with the fact that since the opening of the institution (1871) only two cases of angina pectoris had been registered therein, in both of which the patients had been discharged improved, and in at least one of which no mention was made of an attack occurring while the patient was under observation; neither was the sense of insecurity of life, so essential a symptom in angina, noted. This lack of cases of angina pectoris in the records of the hospital seems to accord with the statement generally made as to the extreme rarity of such cases in hospital practice. Dr. Walshe says that “a solitary well-defined example of true angina” had come under his notice in his wards.

The fact that this cardiac neurosis seems to be a disease of the well-to-do classes, who, as a rule, strongly object to post-mortem dissections, may be a reason why such few necropsies of the malady are contributed to medical literature. Having read the pages of the “New York Medical Journal” for the last two years, I do not remember having met in them with more than one account of an autopsy held upon a patient dead from angina pectoris. This only case was reported by Dr. G. R. Butler before the Brooklyn Pathological Society, and published in the Journal of July 10, 1886. The lesions there found were very similar to those of a case observed by me at the Roosevelt Hospital, a report of the symptoms and pathological changes of which I here give in detail:

The patient, a man aged forty-six and a native of France, was admitted to hospital on the evening of May 28, 1886. He gave on admission the following account of himself: For the past five weeks he had been suffering paroxysmal attacks of pain, which originated in the right half of the mid-sternum, from there shooting backward to the dorsal region, upward to both shoulders, and occasionally, together with a feeling of numbness, down both arms. The pain is of a sharp, stabbing character and “takes the breath away” from him. While it lasts he has a feeling of oppression about the chest, his breathing becomes labored, and he is seized with a fear of impending death. During the attack he perspires freely. Occasionally the paroxysm is attended with eructations of gas from the stomach and vomiting, or one or the other of these symptoms singly. At no time did he lose consciousness nor did he fall to the ground. At the onset of his illness the cardiac crises took place from two to three times a day, and individually lasted from fifteen to twenty minutes. Of late the bouts have been increased to five or six a day.

The patient's mother had been subject to anginoid attacks. The patient himself had never had rheumatism, nor had he evidences of previous cardiac, pulmonary, or nephritic disease. He gave a history of syphilis, having contracted the initial sore twenty-five years previously; and he confessed to the alcohol and tobacco habits.

The man was well nourished, and, though his countenance was rather pale, his mucous membranes were ruddy, and his tongue was red, moist, and clean. His appetite, he said, was small, his bowels were torpid, but he passed his water well and in good quantity. His pupils appeared normal. The heart action was feeble, the cardiac sounds were muffled, and no murmur was audible upon auscultation. The pulse was small and somewhat rapid—96 to the minute; respirations hurried—40 to the minute; temperature, 98° F.

Shortly after admission, 8.30 P. M., the patient was seized with a severe attack of pain and great distress about the chest. He sat up in bed, and, leaning forward upon his upbent knees, clasped his bosom firmly with both hands. He seemed afraid to breathe and held his breath, this cessation of the respiratory act being followed by labored and deep respiration. His face was deathly pale, he looked anxiously about him, yet dared not cry out for relief. His whole frame was moist with clammy sweat, and his extremities were cold to the touch. The radial arteries felt hard and cord-like, and the blood tension was apparently heightened. The heart action was tumultuous and rapid, beating 112 to the minute. At the end of this attack the patient vomited profusely, and, complaining of faintness, he fell back on the pillow, almost on the verge of syncope.

Hardly had he emerged from this paroxysm, which was of a few minutes' duration, when he was attacked by another similar one. Nitrite of amyl was pushed to its full physiological effect —flushing of the face and softening of the pulse—without giving ease. Six minims of Magendie's solution abated the pain, but at the end of an hour, 10 P. M., the patient was taken with cramp in the belly, without any thoracic distress, which called for another hypodermic of morphine for its relief. At about 1.30 A. M. of the following day he arose and walked across the ward to the bath-room. At a few minutes of 3 A. M. he was found in his bed, dead and cold.

At the autopsy, made by Professor Delafield ten hours later, the following appearances were found:

Rigor mortis unusually well marked, most of the voluntary muscles strongly contracted.

Brain not examined.

Lungs fully inflated, lower lobes somewhat congested and œdematous. Heart-walls relaxed, cavities distended with red and yellow clots. Left ventricle somewhat dilated and its walls thinned. Aortic valves thickened and insufficient. Mitral valves a little thickened.

The aorta showed patches of chronic endarteritis along its entire length. Just above the aortic valves there was a large, deep patch, partly calcified. This patch involved the openings of both coronary arteries, narrowing them very decidedly, but beyond this point the walls of these arteries were normal and they contained no thrombi.

The liver, spleen, and kidneys were congested.

OTITIS MEDIA.

By W. H. BAKER, M. D.,

LYNCHBURG, VA.

In the last issue of the "American Journal of the Medical Sciences," in an article by Dr. Burnett, under the caption of "A New Operation for the Radical Cure of Chronic Purulent Inflammation of the Middle-ear Tract," is described an operation or procedure for the removal of the membrana tympani and ossicles, and a general cleaning out of the tympanum, for the cure of this trouble, as performed by Dr. Sexton.

We all admit that there is a vast field for improvement in aural surgery, but hardly think that advancement lies along the line of such surgery, although it may be a good operation in some rare cases. It may not always cure the discharge, but can be commended as a sure cure for eavesdropping. Only a few years ago, in one of the large cities, a doctor, in treating a case of otitis media, through ignorance removed the membrane and ossicles, and in consequence was severely censured by his colleagues, one being an eminent specialist.

But now the doctor would have the authority of Dr. Sexton, and perhaps of Dr. Burnett, to mitigate his mental sufferings on account of his blunder.

In my limited experience in upward of fifty cases of chronic inflammation of the middle-ear tract, ranging from two months' to twenty years' standing, boric acid has proved almost a specific.

Occasionally, in very intractable cases, it is well to alternate the use of the acid with a combination of resorcin and zinc sulphate, gr. xxx of the former to gr. x of the latter in very fine powder.

Both the acid and resorcin are to be used by insufflation after gently syringing and drying the ear with absorbent cotton, and by this means the impalpable powder can be applied to the whole diseased surface. The applications should be made at least once a day until the discharge is under control. When the ossicles are intact, *the hearing always improves after the discharge ceases*, unless the auditory nerve is at fault.

My experience has been that of a great many aurists, and, in view of these facts, it seems unwise and cruel to put a gouge into every inexperienced doctor's hands, so that he can punish indiscriminately the unfortunates who may happen to come under his care, because they presume to have a discharge from the ear which is troublesome to relieve.

In the same journal Dr. Burnett very justly censures the use of corrosive sublimate for suppuration of the middle ear as recommended by Dr. Dujardin, of Havre, on the ground that we have other, better, and safer remedies.

Dr. Corning's Recent Experiments in Local Anæsthetization.— We learn that on Tuesday of this week Dr. Corning demonstrated at Dr. Agnew's clinic, at the College of Physicians and Surgeons, his method of inducing local anæsthesia by painless multiple puncture followed by the use of cocaine and the galvanic current, an account of which appeared in our last issue. The demonstration was in every way successful, and we understand that Dr. Corning has since succeeded in producing anæsthesia of a segment of the forearm of sufficient depth to allow needles to be thrust down to the radius without causing pain.

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MEDICAL WOMEN AND THEIR HUSBANDS.

In a recent number of "Lyon médical" we find an account, quoted from the "Petit Marseillais," of a domestic contention between a lady practitioner of medicine and her husband which has led to proceedings before one of the courts. The action turns upon the question of a husband's legal right to open and read the letters received by his wife. The husband in this case prays the court to affirm his right to do so, and the wife asks that he be restrained from taking such a liberty. The points, as stated by the parties to the suit, show a sort of hand-to-hand conflict grievous to contemplate from the domestic point of view, but one that, it is not difficult to imagine, may readily arise between other medical women and their husbands, and one that is therefore of interest to a rapidly increasing section of the profession.

The lady states that it is a matter of every-day experience for her to receive written communications from her patients, and that in many instances they are of such a nature that professional secrecy is violated if they are read by her husband, who, she says, consented to her becoming a physician and should have taken the consequences into account. She could no more think, she adds, of taking him into her confidence in such matters than of allowing him to witness her private examinations of patients. The husband replies that he would resign himself if it was only from women that the letters came, but says that she gets them from men also. She then asks him if she ever agreed to restrict her practice to women. "No," he mildly answers, "but what about propriety and modesty?" "Everything," the wife retorts, "vanishes in the interest of humanity and science. I have dissected male as well as female subjects. I am *blasée* as regards your sex as I am indifferent to the other. To me man is nothing more than a subject of observation." "That," says the husband, "I can not admit. Since you pretend to love me, or to have loved me, it is evident that your studies have not made you indifferent. I have reason to believe that you are not incapable of sentiment. I fear that your imagination will get the better of your science, and that some new, unknown man will set your heart or your nerves quivering as the result of confidences and visits." "You would forbid my practicing my profession," says she. "No," says he, "I would only take part in it with you to a reasonable extent. I ask not to practice medicine, but I must watch over you as I vowed before the civil magistrate. I owe you aid and protection. How can I protect you if I know not the dangers that threaten you? I will tell nobody what I may read, but I insist on reading everything. Since many women write a masculine hand, just as many men write a feminine hand, I can tell the one from the other only by breaking the seal of every missive and leaving none unexamined."

In his heart, this solicitous husband seems to feel the weakness of his case on general principles, for he seeks to justify his course by citing one of the letters he had opened, the letter in question being one that was not a request for a prescription. It is to be inferred that it was something quite different. But even that does not silence the lady. "Yes," she says, "I have a melancholic patient, one who is disgusted with life and asks me to restore its attractiveness for him. He would love; he is searching after love and is in despair that he does not meet with it. As his languishing state is connected with hereditary tendencies, and as I think the best way of bringing him back to a wholesome mode of life lies in avoiding abruptness, I do not talk medicine to him in our interviews, and in his letters he answers me with sentiment. Must physicians be accused of leading their patients on to love them, because they humor their illusions before giving them drugs? Any woman may be faithless, as any man may be victorious; but if I were an actress, an artist, or simply a woman of independent means, unemployed, passing my days alone, I should be quite as much exposed, if not more, as in leading a life that shows me humanity in its miseries and in its injuries. You would have less correspondence to look over, but you would have more equivocal interviews to break up. Is it because I have made myself estimable, by working, by acquiring knowledge, by trying to do good, that I am exposed to the injury of your suspicions? At bottom, it is not of my frailty that you are jealous, but of my dignity and my importance. If I were a frivolous nonentity I should possess your confidence; being a useful and serious woman, but less easy to deceive, I awaken your distrust. You are afraid of becoming my inferior, and you are trying tyranny to preserve the balance!"

The connubial tie having been strained to the degree exemplified in this state of antagonism, it may make little difference to the parties to the suit how the court decides, but the decision can scarcely fail to come up in the minds of female practitioners of medicine meditating matrimony, or in those of husbands called upon to consent to their wives' studying medicine.

MINOR PARAGRAPHS.

THE NEW YORK STATE MEDICAL ASSOCIATION.

We must again congratulate this young organization on the attractiveness displayed in the programme for its annual meeting. Three important discussions are to be conducted by gentlemen well known to be admirably fitted to shed the light of contemporary knowledge on the questions at issue; a great many papers are to be read by individuals, in nearly every title of which a subject of practical interest may be recognized; and pathological and bacteriological demonstrations are to be given that can not fail to be in the highest degree instructive.

THE NEW YORK ACADEMY OF MEDICINE.

The Academy's next meeting, to be held next Thursday evening, promises to be of more than ordinary interest. The preparation of the anniversary discourse has been intrusted to very capable hands, and, as will be seen by a notice which we print elsewhere, means have been taken to enable those of the general public who are interested in medicine to attend. We are confident that Dr. Draper will find something to present that ought to be listened to by many a citizen who is not a member of the medical profession.

ITEMS, ETC.

Infectious Diseases in New York.—We are indebted to the Sanitary Bureau of the Fourth Division of the Health Department for the following statement of cases and deaths reported during the two weeks ending November 9, 1886:

DISEASES.	Week ending Nov. 2.		Week ending Nov. 9.	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever	41	11	27	11
Scarlet fever	21	4	22	5
Cerebro-spinal meningitis	2	2	6	5
Measles	183	20	218	26
Diphtheria	70	42	106	37

The International Medical Congress.—We learn that among the foreign physicians who are expected to attend the congress, and to read papers, are the following: Mr. W. D. Spanton, of England; Dr. E. Landolt, of Paris; Dr. A. Struebens, of Brussels; Dr. Julius Althaus, of London; Dr. A. Cordes, of Geneva; Dr. P. Ménière, of Paris ("The Treatment of Fibrous Tumors of the Uterus"); Dr. T. M. Madden, of Dublin ("Laparotomy in Relation to Modern Gynæcology"); Dr. W. U. Whitmarsh, of England ("Vaccination and the Pasteur Method"); Dr. Léon Petit, of Paris; Dr. A. Hegar, of Freiburg ("The Diagnosis, Origin, and Surgical Treatment of Tuberculosis of the Genitalia"); Dr. G. H. Savage, of London ("Some Relationships of Syphilis to General Paralysis of the Insane"); Dr. W. Macewen, of Glasgow; Mr. Edmund Owen, of London; Mr. Lawson Tait, of Birmingham ("The Pathology and Treatment of Tubal Pregnancy"); Dr. J. Veit, of Berlin ("Tubal Pregnancy"); Dr. D. Perruzzi, of Bologna ("In the Cases of Cæsarean Section in which Porro's Hystero-oophorectomy is not absolutely indicated, what is the best manner of Suturing the Wound of the Uterus?"); Dr. E. Ehrendorfer, of Vienna ("The Prophylaxis of Puerperal Fever"); Dr. J. A. Doléris, of Paris; Dr. Gusserow, of Berlin; Dr. A. Charpentier, of Paris; Dr. G. Braun, of Vienna; Dr. L. Casarti, of Florence ("The Origin and Causes of Sterility in Women"); Dr. J. Korosi, of Budapest ("New Observations on the Preservative Power of Vaccination"); Dr. E. H. Kirch and Dr. A. Olendorff, of Prague; Dr. H. Power, of London ("Microbes in the Development of Ophthalmic Diseases"). Dr. A. Eulenburg, of Berlin; Dr. W. Murrell, Dr. B. W. Richardson, and Dr. J. L. W. Thudichum, of London; Dr. Dujardin-Beaumetz, of Paris; Dr. G. P. Unna, of Hamburg; and Dr. Eustace Smith, Mr. Christopher Heath, and Dr. H. Charlton Bastian, of London, are also expected.

The Death of one of M. Pasteur's Patients lately occurred at St. Thomas's Hospital, London, and we find the particulars of the case given in the "British Medical Journal." The man had been bitten by an enraged cat, but it does not appear that the animal was rabid. On his return from Paris, where he had been subjected to M. Pasteur's system of inoculations, he was in good health and spirits. Three days afterward, he was attacked with abdominal pains, and these were followed by paralytic symptoms. He stated that, on the way home from Paris, he had been exposed to a thorough drenching, and the pains were thought to be due to too much beer. A coroner's jury returned a verdict to the effect that death was due to acute spinal paralysis. The account intimates that a minute examination of the spinal cord is to be made.

A New Private Hospital for the treatment of diseases peculiar to women has been opened in Memphis, Tenn., by Dr. Mitchell and Dr. Maury.

The Massachusetts Medical Society.—At the semi-annual meeting of the Bristol South District Branch, held at New Bedford, on Wednesday, the 10th instant, Dr. A. J. Abbe read a paper on "Chronic Endometritis," and Dr. G. De N. Hough one on "Abscess." The discussion on Dr. Abbe's paper was opened by Dr. C. D. Prescott, and that on Dr. Hough's by Dr. J. H. Abbott.

The Legion of Honor.—The "Union médicale" announces that Dr. Pozzi, of Paris, has been nominated a Knight of the Legion of Honor.

A German Anatomical Society has been founded, says the "Lancet," with Professor Kölliker as president and Professor Bardeleben as secretary.

The New York State Medical Association.—At the third annual meeting, to be held in Lyric Hall on Tuesday, Wednesday, and Thursday of next week, the following papers are expected to be read: "Some Observations on the Mineral Waters of Saratoga," by Dr. R. C. McEwen, of Saratoga Co.; "Recovery *versus* Cure," by Dr. Alfred L. Carroll, of Richmond Co.; "Is Erysipelas ever a strictly Local Disease? If not, what should be its Rational Treatment?" by Dr. Frederick Hyde, of Cortlandt Co.; "A Peculiar Foreign Body in the Stomach, with specimen and photographs," by Dr. W. Finder, of Rensselaer Co.; "The Morphine and Cocaine Habits," by Dr. Judson B. Andrews, of Erie Co.; "Medicine and Pharmacy Abroad," and "The Relations of Physicians to their Medical Supplies," by Dr. E. R. Squibb, of Kings Co.; "The Treatment of Inflammatory Rheumatism, considered with reference to its Complications and Terminations," by Dr. Avery Segur, of Kings Co.; "Dislocations of the Ankle," by Dr. C. W. Brown, of Chemung Co.; "Commercial Prescriptions," by Dr. H. C. Van Zandt, of Schenectady Co.; "A Modification of Politzer's Air-Bag," by Dr. H. E. Mitchell, of Rensselaer Co.; "Intestinal Obstructions, with report of cases," by Dr. B. L. Hovey, of Monroe Co.; "A Case of Naso-pharyngeal Tumor, with Remarks upon its Pathology and Treatment," by Dr. Nathan Jacobson, of Onondaga Co.; "On Nephrectomy," by Dr. E. D. Ferguson, of Rensselaer Co.; "A Plea for the Use of Sims's Speculum by the General Practitioner," by Dr. W. H. Roff, of Montgomery Co.; "Congenital Stenosis of the Nose," by Dr. A. A. Hubbell, of Erie Co.; "History of an Epidemic of Dysentery at the Almshouse, Blackwell's Island, New York City, during the Summer of 1886," by Dr. H. M. Biggs, of New York Co.; "A Review of the Fever Epidemic in Kingston, Ulster County, during the Winter of 1884–'85," by Dr. H. Vanhoevenberg, of Ulster Co.; "Peculiarities in a Case of Ovariotomy," by Dr. J. G. Orton, of Broome Co.; "A Remarkable Case of Diphtheritic Toxæmia," by Dr. J. C. Hannan, of Rensselaer Co.; and "Sacculation and Perforation of the Bladder as Consequences of Chronic Retention of Urine," by Dr. J. W. S. Gouley, of New York Co.

An Address in Medicine will be given by Dr. S. T. Clark, of Niagara Co., and an Address in Therapeutics by Dr. C. G. Stockton, of Erie Co. A discussion on "Shot-wounds of the Intestine" will be opened by Dr. W. S. Tremaine, of Erie Co., and continued by Dr. J. D. Bryant, of New York Co., Dr. E. M. Moore, Jr., of Monroe Co., Dr. W. T. Bull, of New York Co., Dr. T. R. Varick, of New Jersey, Dr. C. B. Nancrede, of

Pennsylvania, Dr. F. S. Dennis, of New York Co., Dr. J. B. Hamilton, of the District of Columbia, and Dr. C. T. Parkes, of Illinois. A discussion on "Pulmonary Tuberculosis" will be opened by Dr. H. D. Didama, of Onondaga Co., and continued by Dr. John Cronyn, of Erie Co., Dr. H. M. Biggs, of New York Co., Dr. H. L. Elsner, of Onondaga Co., and Dr. W. H. Flint and Dr. John Shrady, of New York Co. A discussion on "Eclampsia" will be opened by Dr. W. T. Lusk, of New York Co., and continued by Dr. James Tyson, of Pennsylvania, Dr. I. E. Taylor, Dr. T. G. Thomas, and Dr. G. T. Harrison, of New York Co., Dr. Darwin Colvin, of Wayne Co., Dr. J. R. Macgregor, of New York Co., and Dr. G. A. Blumer, of Oneida Co. Screen-projections and microscopical and cultivation preparations will be shown at the Carnegie Laboratory by Dr. E. G. Janeway and Dr. H. M. Biggs, of New York Co. There will be a conversazione at the Murray Hill Hotel Thursday evening, to be followed by a supper.

Honorary Degrees.—At the recent celebration of the two hundred and fiftieth anniversary of the establishment of Harvard University, the following-named members of the medical profession were among those on whom the degree of LL. D. was conferred: Professor Joseph Leidy, of the University of Pennsylvania; Dr. S. Weir Mitchell, of Philadelphia; and Dr. John S. Billings, of the army.

Dr. Bulkley's Clinical Conferences on Diseases of the Skin were resumed at the New York Hospital on Wednesday, the 3d inst. The course is free to all members of the profession.

Army Intelligence.—*Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from October 31, 1886, to November 6, 1886:*

CLEMENTS, B. A., Major and Surgeon. Died November 1, 1886, at Fort Leavenworth, Kansas.

MIDDLETON, J. V. D., Major and Surgeon. Ordered from Department of the Missouri to David's Island, New York Harbor. S. O. 252, A. G. O., October 29, 1886.

WOODHULL, A. A., Major and Surgeon. Ordered from David's Island, New York Harbor, to Department of the Missouri. S. O. 252, A. G. O., October 29, 1886.

WILLIAMS, J. W., Major and Surgeon. Ordered from Department of the Columbia to Department of the East. S. O. 252, A. G. O., October 29, 1886.

CORSON, J. K., Captain and Assistant Surgeon. Ordered from Jefferson Barracks, Missouri, to Department of the Columbia, upon expiration of present leave of absence. S. O. 252, A. G. O., October 29, 1886.

TURRILL, H. S., Captain and Assistant Surgeon. Ordered from Department of the Platte to Department of the Columbia. S. O. 252, A. G. O., October 29, 1886.

MUNDAY, BENJAMIN, First Lieutenant and Assistant Surgeon. Ordered from Department of the Columbia to Jefferson Barracks, Missouri. S. O. 252, A. G. O., October 29, 1886.

OWEN, WILLIAM O., JR., First Lieutenant and Assistant Surgeon. Relieved from duty at Fort Schuyler, New York Harbor, and ordered for duty as post surgeon, Plattsburg Barracks, New York. S. O. 170, Division of the Atlantic, October 29, 1886.

EDIE, GUY L., First Lieutenant and Assistant Surgeon. Ordered from Fort McIntosh, Texas, to Post of San Antonio, Texas. S. O. 152, Department of Texas, October 27, 1886.

HARRIS, H. S. T., First Lieutenant and Assistant Surgeon. Ordered from Post of San Antonio, Texas, to Fort Clark, Texas. S. O. 152, Department of Texas, October 27, 1886.

Naval Intelligence.—*Official List of Changes in the Medical Corps of the United States Navy for the week ended November 6, 1886.*

NEILSON, J. L., Surgeon. Ordered to the Receiving-ship New Hampshire.

DRENNAN, M. C., Surgeon. Detached from the Receiving-ship New Hampshire, and granted one year's leave.

Marine-Hospital Service.—*Official List of Changes of Stations and Duties of Medical Officers of the United States Marine-Hospital Service, for the two weeks ended November 6, 1886:*

AMES, R. P. M., Passed Assistant Surgeon. Relieved from duty at Marine Hospital, New York, N. Y.; to assume charge of Marine Hospital, Vineyard Haven, Mass. November 1, 1886.

URQUHART, F. M., Passed Assistant Surgeon. To proceed to Norfolk, Va., for duty. November 4, 1886.

YEMANS, H. W., Passed Assistant Surgeon. Relieved from duty at Marine Hospital, San Francisco, Cal.; to assume charge of the Service at Galveston, Texas. November 1, 1886.

WASDIN, EUGENE, Passed Assistant Surgeon. When relieved, to proceed to New York, N. Y., for duty at Marine Hospital. November 1, 1886.

WILLIAMS, L. L., Assistant Surgeon. Relieved from duty at Marine Hospital, Wilmington, N. C.; to proceed to Pittsburgh, Pa., for temporary duty. November 5, 1886.

PERRY, T. B., Assistant Surgeon. Relieved from duty at Marine Hospital, St. Louis, Mo.; to proceed to San Francisco, Cal., for duty at Marine Hospital. November 1, 1886.

Society Meetings for the Coming Week:

MONDAY, *November 15th:* New York Academy of Medicine (Section in Ophthalmology and Otology); New York County Medical Association; Hartford, Conn., City Medical Association; Chicago Medical Society.

TUESDAY, *November 16th:* New York State Medical Association (first day—New York); New York Academy of Medicine (Section in Theory and Practice of Medicine); New York Obstetrical Society (private); Medical Society of the County of Kings, N. Y.; Ogdensburg, N. Y., Medical Association.

WEDNESDAY, *November 17th:* New York State Medical Association (second day); Harlem Medical Association of the City of New York; Northwestern Medical and Surgical Society of New York (private); New Jersey Academy of Medicine (Newark); Philadelphia County Medical Society (Clinico-pathological).

THURSDAY, *November 18th:* New York State Medical Association (third day); New York Academy of Medicine; New Bedford, Mass., Society for Medical Improvement (private).

FRIDAY, *November 19th:* Roman Medical Society (private); Chicago Gynæcological Society.

SATURDAY, *November 20th:* Clinical Society of the New York Post-graduate Medical School and Hospital.

OBITUARY NOTES.

Julius Francis Miner, M. D., of Buffalo, died on Friday of last week. Dr. Miner was born in Peru, Berkshire Co., Mass., February 16, 1823. He took his medical degree at Albany in 1847, spent eight years in practice in Massachusetts and New Hampshire, and then took up his residence in Buffalo. He became an editor of the "Buffalo Medical and Surgical Journal," a member of the Medical Society of the State of New York and of various local societies, and a surgeon to the Buffalo General Hospital and to the Hospital of the Sisters of Charity. In 1863 he was commissioned as surgeon of the Seventy-fourth Regiment, N. G. S. N. Y. In 1867 he was appointed professor of ophthalmology and surgical anatomy in the Buffalo Medical College, and in 1870 professor of special and clinical surgery in the same institution. He was the first to practice enucleation in ovariotomy, which he did in 1869.

Frank A. Durgin, M. D., of Salem, Mass., died on Thursday, November 4th, at the age of thirty-one. He was graduated from the College of Physicians and Surgeons of this city in 1881, and at the time of his death was a member of the medical staff of the Salem Hospital. He was a member of the Massachusetts Medical Society and of the Essex, Mass., South District Medical Society. His death is said to have been due to typhoid fever.

Samuel N. Fisk, M. D., of Brooklyn, died suddenly on Wednesday last. He was graduated from the Medical Department of the University of the City of New York in 1861, and, at the time of his death, was an inspector in the Brooklyn Health Department.

Proceedings of Societies.

NEW YORK ACADEMY OF MEDICINE.

Meeting of November 4, 1886.

The President, Dr. A. Jacobi, in the Chair.

The Krackowizer Prize.—The President announced that the subject for the prize was "New Observations on Osteomyelitis," and that contributions should be handed in on or before the 1st of January, 1889.

The Anniversary Address.—The President said the anniversary address would be delivered by Dr. William H. Draper at the next meeting of the Academy. The public was invited to attend.

The Movements of the Heart and Intestines, Illustrated by Photography.—Dr. William Gilman Thompson exhibited photographs of the normal pulsating heart at the various periods of the pulsation in rabbits, kittens, lizards, pigeons, etc. He also exhibited photographs exhibiting modifications in the movements of the heart consequent upon the administration of various stimuli. In this way he was able to give graphical illustrations of the effects of drugs upon the heart. He had at first employed an ordinary camera, but, as only one plate could be used at a time, he had constructed an apparatus by which he could take six views of the object within a second. The shape of the heart varied very considerably in different animals, but in general the longitudinal diameter exceeded the transverse by about one fourth in full diastole. The modifications in the form of the heart depended chiefly upon the thick-walled left ventricle. In the open chest the movements of the heart were greatly exaggerated by artificial respiration; if artificial respiration was not maintained the movements might be diminished.

The most important of his later observations were as follows: 1. The base of the heart descended very little, if at all, in systole in most animals. A prominent exception to this rule was seen in the frog. 2. There was much discussion among physiologists as to whether the long diameter was shortened to any appreciable extent in passing from full diastole to full systole. The photographs showed much variation in this matter, and we could hardly judge from what took place in animals as to what took place in the human subject. In most animals there was a slight shortening, but in pigeons there was slight elongation. The transverse diameter was shortened usually twice as much as the longitudinal diameter in full systole. The average shortening of this diameter amounted to from one quarter to one third. It was uniform from base to apex, unless interfered with by drugs. The antero-posterior diameter was uniformly elongated by about one eighth. In a given heart this diameter was elongated about half as much as the transverse diameter was shortened during systole. 3. The apex, when the pericardium was removed, in birds and mammals, was uniformly tilted forward, upward, and to the right, and the rotary movement of the heart from left to right on its long axis occurred in the excised heart as well as in the heart *in situ;* in other words, it occurred when the base of the heart was free, without vessels to offer resistance to it. 4. The right ventricle lay so much higher, and it was so much thinner-walled than the left, that it exerted much less influence on the shape of the heart during its movements, especially at the apex. The author inferred from his experiments that the cardiac impulse against the chest-wall might be due to the stroke of the apex, and perhaps also partly to the stroke of the anterior and hardened ventricular wall just above the apex.

The apex, as well as the whole contour of the heart, was greatly modified by drugs. Drugs which had the primary effect of increasing the systolic force tended to make the apex sharper, whereas drugs of which the action was to lengthen the diastole tended to make the apex blunt and round. If antagonistic drugs were given, the whole contour of the heart became more rounded than was natural. The surface of the heart in all its normal changes in size between full diastole and full systole was smooth, but stimulants caused it to become more or less irregular. When the heart was deprived of its blood by hæmorrhage, the thick left ventricle retained its shape pretty well, but if the heart was held up, the right ventricle would be seen to pouch out below. The apparent greater vitality of the right side of the heart was observed in the feeble efforts to beat after the left ventricle had ceased its movements. The auricles in systole were uniformly contracted to a slight degree. The independence of the auricles and ventricles of each other in contraction was shown by the photographs. The auricular systole overlapped the ventricular systole in point of time. The extent of movement of the heart as a whole bore no definite relation to its size, but depended altogether upon the amount of work being done. The heart, being removed from its attachments and emptied, filled itself by suction when placed in fluid, and assumed a rounded form. It had been a question whether the coronary arteries were filled during systole, or whether they were closed during systole by the cusps of the valves. If the latter was the case, these arteries must be filled during ventricular diastole by the elastic recoil of the aorta. The very great prominence of the vessels in the photographs showed that the blood-flow was impeded and dammed back in the superficial vessels by the pressure of the strongly contracted ventricles. If now, as had been shown by experiments, the coronary arteries were divided during systole, the blood would spurt with some force. The conclusion arrived at by Dr. Thompson was that the coronary arteries were filled by the recoil of blood during diastole, and perhaps also to some extent during systole. By dividing the longitudinal and spiral muscular fibers the contraction of the circular fibers was shown to be uniform and symmetrical. The papillary fibers were shown to stand out toward the center of the heart and to have independent contractile power. Of the various cardiac stimulants which he had employed, heat produced the strongest systole, and was most uniform in its effect. With aconite he paralyzed the right ventricle, while the left retained its power to contract. Glonoin appeared to be the most powerful chemical cardiac stimulant. Chloral caused marked diastole.

Dr. Thompson had also been successful in photographing the movements of the intestines, bladder, and diaphragm. Scratching the large intestine caused it to contract in ridges, which did not extend far from the point of irritation. The effect of the contraction was to shorten and draw up the entire loop. It was a disputed point as to whether the peristaltic wave passed normally in the reverse direction from the anus up. He had photographed peristaltic waves passing simultaneously in opposite directions; also the pendulum movement of the intestine. Pricking the intestine caused a stricture-like form of contraction.

Dr. A. H. Smith asked whether it was not probable that a systolic murmur was sometimes mistaken for a præsystolic one, the observer dating the commencement of the systole from the stroke of the heart against the chest-wall.

Dr. Thompson did not doubt that systole began before the stroke of the heart against the chest-walls, and consequently such an error in diagnosis might occur.

Two Operations for Intestinal Obstruction.—In a paper with this title, Dr. W. Gill Wylie said that out of sixty-seven laparotomies which he had performed since January, 1885, he had selected six cases which were not strictly gynæcological cases to report to the Academy. He gave the details of only two cases. The first was one of intestinal obstruction occurring in a woman aged fifty years. Eleven years ago a fibroid tumor was discovered in the pelvis. A physician introduced a uterine sound and caused a violent attack of peritonitis, and since then the patient had had great trouble in getting the bowels to move. Previous to October 6th she had more or less abdominal distension and pain. During that night she had a violent attack of colic and vomiting; the bowels could not be moved. Symptoms of intestinal obstruction existing, Dr. Wylie was called in consultation, and six days after the commencement of these symptoms he opened the abdomen. He encountered some peritoneal cysts, from which ten or twelve ounces of fluid escaped. There was a large fibroid involving the uterus and broad ligaments, but, on account of the age of the patient, and the difficulty of removing the tumor, it was allowed to remain. The intestines were taken out, covered with towels, and found distended above the point of obstruction; the constricting band of lymph was cut, the intestine, which was not decayed but discolored at the point of constriction, was replaced, and the patient made a good recovery. She had had less trouble with the bowels since the operation than before.

Dr. Wylie also related a case in which there was only partial intestinal obstruction, and expressed the opinion that peritoneal inflammation with constricting bands of lymph developed frequently after abdominal puncture, and he strongly urged the advantage of laparotomy and radical measures over the temporary expedient of tapping abdominal tumors. After laparotomy constricting bands would be less likely to form, or would be broken up, if the bowels were moved at any earlier date than was commonly practiced; in suspicious cases he caused a movement after the first twenty-four hours. The author also mentioned two or three cases in which he had practiced permanent drainage for peritonitis attending tuberculosis, etc.

A Building Fund.—At the close of the scientific proceedings the President made some remarks upon the need of a new building, and said that about three hundred thousand dollars would be necessary to commence it. In addition to the donations already received, a gift of seventy thousand dollars would soon come into the possession of the Academy. The importance of establishing a building fund was evident, and the resolution offered by Dr. Agnew at the last meeting was unanimously adopted.

NEW YORK PATHOLOGICAL SOCIETY.

Meeting of October 13, 1886.

The President, Dr. John A. Wyeth, in the Chair.

Rare Lesions Produced by Bromide of Potassium.—Dr. R. W. Amidon presented an epileptic young woman, who had been under his care four years, taking moderate doses of bromide of potassium — perhaps never more than four or five drachms a day. A little over a year ago she discontinued it, but recently he learned that she had been taking during the past eighteen months a mixture of the bromides amounting to six drachms a day. She then returned to him and he found the ordinary acne on the face, which, although usually confined to the face and neck, perhaps occasionally reaching to the chest and shoulders, had in this patient, as in two others whom he had seen, invaded the legs, and assumed almost the pustular form. The lesion began in the ordinary way, but became indurated with rather a large base, and ran a chronic course, breaking down and forming what appeared to be a small ulcer. Vesicles, with contents which tended to become cloudy and purulent, formed in rings about the acne spot. After a time the center of the spot took on a reparative process, and entirely healed, while the pathological changes at the periphery spread, and the vesicles became purulent, dried up, and formed a brownish scab. A section of one of these spots showed that there had not been a true ulcer, but that the skin had simply been denuded of the cuticle, leaving the papillæ intact. He had in no case seen the true skin invaded. The disease did not seem to depend particularly upon the amount of the bromides given. The only treatment which he had seen do good was the thorough application of the actual cautery.

Ulcerative Endocarditis.—Dr. T. Mitchell Prudden presented four specimens of ulcerative endocarditis, the disease in three being simple and acute, in the fourth malignant or produced by specific bacteria. He also presented specimens the result of experiments on rabbits and man. In the first three cases the clinical history and the autopsy showed simple acute ulcerative endocarditis, with absence of bacteria. In the fourth case, that of a girl, the disease developed after a surgical operation and symptoms of pyæmia. In this case the *Staphylococcus pyogenes aureus* was found. There was also evidence of a previous chronic lesion of the heart. In his experiments the speaker inoculated some rabbits with the *Staphylococcus aureus* found in the inflamed cardiac tissue in the case of the girl, in some making a lesion of the heart, in others not, and in those with injury of the heart malignant endocarditis—in other words, endocarditis in which the bacteria were found—developed; in the other cases the animals escaped, or had simple pyæmia without lesion of the heart. An inoculation of the hand of a man with the same bacteria produced an abscess containing the bacteria, but no other result. It was notable that in the girl with pyæmia there was a chronic endocarditis. This was a fact of importance, as it should lead the surgeon to take unusual precautions against pyæmia in patients having a heart lesion, lest malignant endocarditis should develop. The distinction should always be made between malignant or bacterial and simple acute ulcerative endocarditis; in the former the bacteria were always present, while in the latter they were always absent. However large and numerous the ulcers were, the case should be classed as one of the simple variety unless the bacteria were present. Without the cultivation process the bacteria could not be identified.

Mitral Stenosis with Thrombus of the Right Auricle.—Dr. R. Van Santvoord presented specimens from a boy, aged ten years, who had at one time had rheumatism, and eighteen days before death was admitted to the hospital with general œdema, shortness of breath, and ecchymoses of the hands, feet, legs, and scrotum. There was a double mitral murmur. The diagnosis of acute ulcerative endocarditis was made, but the autopsy showed simply mitral stenosis and thrombus of the right auricle, which had given rise to the petechial spots.

Ulcer of the Colon; Abscess of the Liver.—Dr. Frank Ferguson presented the specimens, together with a brief history of the case. The diagnosis of abscess of the liver had been made during life, but the aspirator had failed to withdraw pus.

Aneurysm of the Posterior Branch of the Middle Cerebral Artery.—Dr. Ferguson presented a specimen from a man aged thirty-eight, a nurse, who had fallen suddenly to the floor and become unconscious. The post-mortem showed a very large hæmorrhage into the brain on the left side, connected with a large sac seen at the end of the posterior branch of the middle cerebral artery.

Pigmentation in Malarial Fever.—Dr. Ferguson presented different organs from two patients, both of whom had had chills and fever contracted in a southern climate. The brain, the pancreas, the liver, the stomach, and all the organs of the body were deeply pigmented. The diagnosis had been made from the presence of free pigment in the blood.

Large Cystic Tumor of the Scalp.—Dr. Robert Newman presented a cyst, about as large as an orange, removed entire from the integument on the side of a woman's head, that afternoon.

Nasal Polypus.—Dr. Newman also presented the remains of a large nasal polypus removed from a girl with Jarvis's snare. It was the only case in which he had found the snare superior to the galvano-cautery and torsion.

NEW YORK NEUROLOGICAL SOCIETY.

Meeting of October 5, 1886.

The President, Dr. C. L. Dana, in the Chair.

Congenital Absence of the Faculty of Co-ordination.—Dr. G. M. Hammond presented a boy four years of age, brought to his clinic on account of inability to walk. He was born at full term, the labor was natural, and he appeared to be perfectly healthy at birth. Shortly afterward he became sick, and continued more or less ill for six months. The attending physician diagnosticated colic. Since recovery from this attack the patient had had no sickness. The special senses were normal; the patient understood as well as other children of his age. Perhaps he did not speak so plainly as he should, but two other children in the family, perfectly healthy, talked in the same manner. There was no history of syphilis. The patient was well formed, the muscles of the limbs were well developed for a child who did not walk, muscular reaction to both electric currents was normal, and the reflexes were normal. The only apparent reason for his inability to walk was want of power to retain his equilibrium. He could crawl on his hands and knees perfectly well unless he attempted to go very fast, when he would fall, and he always fell toward the right. He could stand, holding on to a chair, and walk pretty well if held upright. There was also inco-ordination in the upper extremities. He widened his base in standing. Dr. Hammond had not decided whether there was congenital absence of the sensory tract in the cord or cerebellar disease.

Dr. Julius Rudisch had seen two similar cases—both in girls, one about eight years old and the other about thirteen. The first was seen some years ago and was under observation but a short time, and his recollection of the case was indistinct. But he had been impressed with what he took to be muscular weakness, not simply ataxia, but weakness in the back. The child, if sustained, could walk well; if not sustained, it would fall like the boy presented by Dr. Hammond. The older patient could walk, but in a peculiar ataxic way, and in the position of marked lordosis. The legs were well developed, and for that reason he thought the trouble was in the muscles of the back. The cases were not, in his opinion, cases of congenital locomotor ataxia.

Dr. N. E. Brill thought that such cases were not uncommon, especially among idiots. The gait of the boy presented reminded him of the swaying motion of a cat sent Dr. Spitzka by Professor Wilder. Other actions than walking were natural. Dr. Spitzka had removed the cerebellum of the cat alluded to and found it natural. We had to distinguish in these cases between locomotor ataxia and static ataxia. Dr. Hammond's case appeared to be one of static ataxia due to a rudimentary state of the cerebellum.

The President had found in his case-books a history in which a provisional diagnosis of infantile ataxia was recorded. The patient, a girl about two years old, was well nourished and large. She could not co-ordinate the hands or feet. In addition there were some forced movements; the head would suddenly plunge forward.

Vesico-Genito-Post-Femoral Neuralgia and Neuritis.—Dr. Landon Carter Gray read a paper in which he described two cases, seen during the year, of a peculiar variety of neuralgia and neuritis that had not, so far as he had been able to ascertain, been hitherto described. The first patient was a man, aged forty, in good general health, but of a marked lithæmic temperament, subject every summer to quasi-malarial attacks. Hitherto his neuralgia had been gastric or intestinal. He escaped his usual attack this year until July, when the temperature fell in one night 48° F., and on the second day following, when getting out of bed, the patient felt a sharp, tingling pain through the buttocks, perinæum, scrotum, and tip of the penis, and down the back of both thighs to a point somewhat above the knee. Some slight smarting was felt in urination. Toward the afternoon the pain began to lessen, but became much worse again after a Turkish and Russian bath. The cutaneous pains became violent, the urination caused a feeling of scalding, the bladder became paretic, and the urine had to be forced into the urethra. For four days the temperature ranged from 100° in the morning to 102° or 103° in the afternoon, the neuralgic symptoms still existing.

The second case was that of a woman, aged thirty-five, seen in consultation with Dr. Burge, September 6th. During the past two years she had had a good deal of sciatica; otherwise she had had good health. In December last she was suddenly attacked with sharp pain in the buttocks, perinæum, and labia, and down the back part of the thighs to the knees. There was simultaneous retention of urine, requiring the catheter. Several weeks later Dr. Burge saw the patient, and found tactile anæsthesia of the buttocks, the perinæum, the labia, and the back part of the thighs to just above the knee. The speaker saw the patient nine months after the onset of the trouble. She then had vesical anæsthesia, and voided urine without her knowledge. Over the area just mentioned, except the labia, which he was not allowed to examine, he found impairment of the tactile, temperature, and pain senses, but slightly less marked near the knee than above. There had never been any motor impairment.

These cases had a clinical interest, because a knowledge that such a neuralgia might occur would make us chary about diagnosticating a central affection, as we might well be inclined to in the early stage, especially when there was vesical, motor, or sensory paralysis.

Dr. Rudisch asked whether an examination had been made for prostatitis, which caused symptoms in a degree like those described.

Dr. Gray said the area of distribution of the pain was not like that in prostatitis; besides, the second case occurred in a female.

Dr. W. H. Thomson referred to the case of a woman from the country—a locality said by her physician to be free from malaria. After a prolonged convalescence from an attack of pleurisy, she began to suffer severe pain in the anterior part of the left thigh, and slight trouble with the bladder, the pains coming on certain days of the week, lasting one day and two nights. This continued five months, when she was free until the following autumn. The medicine prescribed by the speaker had not prevented a return of the singular symptoms again the present season. There was no indication of sciatica.

Discussion on the Uses of Hyoscyamine.—The President stated that there were two preparations of the drug—the crystalline and the amorphous. The former seemed to be similar in property to the opiates, while the latter seemed to have neurotic properties. He had heard that hyoscyamine was employed in the asylums for the insane in New York, but not very successfully; whereas in the asylums of Pennsylvania its success had been marked. He had employed hyoscyamine in paralysis agitans, in chorea, and in a few cases as a hypnotic, and it had been employed as a hypnotic to a considerable extent in his service at Bellevue Hospital. The number of cases of chorea in which he had used it was six; in three it was noted to have been of benefit, or to have caused very rapid or very marked improvement. One of the cases was marked, and had not yielded to other treatment. In three cases the results were very doubtful. He had employed it in four cases of paralysis agitans; in two, he thought, with unquestionable benefit. In two it seemed to produce no benefit. On the whole, he thought that, unless given at rather an early stage of paralysis agitans, it did no good. The form employed in chorea and paralysis agitans was the crystalline; but he was not sure that the amorphous form would not be the better preparation in such cases. He thought we could get along perhaps as well without as with hyoscyamine.

Dr. B. Sachs's experience with hyoscyamine had not been very extensive, but he had employed it in a few cases of paralysis agitans, acute mania, and the insomnia accompanying the neurasthenic condition. He had employed only the crystalline form. In contradistinction to what the president had said, that it was best to give it in the early stage of paralysis agitans, he remembered one case in which every other therapeutic agent had been tried without success, when hyoscyamine was administered in about one one-hundredth-of-a-grain doses twice a day, with the effect of making the patient very much more comfortable, and of diminishing somewhat the annoying movements of the hand. In another chronic case it had been of no benefit. He had obtained no effect from the drug in allaying the excitement of acute mania. It had also been disappointing in insomnia accompanying neurasthenia. It seemed to be of more value against insomnia from mental restlessness.

Dr. W. M. Leszynsky said that about eight years ago it was quite fashionable to use hyoscyamine in asylum practice, and he had employed it in chronic mania, acute mania, and epileptic forms of insanity. First he used the amorphous form, and afterward the sulphate. It had been said that the latter form was easier absorbed, and produced its effects in smaller doses. The sulphate was also preferred for hypodermic use, in which manner he had employed it in one-sixtieth-of-a-grain doses. To patients with recurring attacks of maniacal symptoms the drug was given a few days before an expected attack, and continued until the attack was aborted. In a state of exhaustion he would regard hyoscyamine as a dangerous drug to administer; but, where there was no objection to its use on that ground, he had known it to produce sleep where chloral and morphine had failed. Given to patients subject to epileptoid convulsions before menstruation, it had seemed to avert the attack. He had given it in small doses in two or three cases of chorea, and thought it produced some benefit.

Dr. Gray had been using hyoscyamine ever since it had been introduced to the profession, and he must say that for certain purposes there was no drug that he could not better afford to dispense with. The most convenient form was in tablets, one one-hundredth of a grain each. In some people hyoscyamine would produce seemingly serious retention of urine. It might also produce disastrous results if given to persons whose general strength was below par. In an old gentleman, with atheromatous arteries, hypertrophied and feeble heart, one one-hundredth of a grain had caused a condition of collapse. He knew of one patient suffering with melancholia whose death had been hastened by it. He had given it in two cases of chorea, one being an exceedingly violent case. The child finally died in a convulsion. To that patient he could never give a second dose of hyoscyamine because of the alarming prostration which a first dose would cause. In another case, in which the child had to be held in bed, the drug proved an effective means of restraint, but the child was always found prostrated to a marked degree the next day. In paralysis agitans it had been very useful, and its use had come to be with him a routine treatment. He thought the reason why it had been of more benefit in his practice was that he combined with it some stimulant or tonic to prevent its depressing effect. He gave with it good food, one or two grains of quinine a day, and sometimes alcoholic stimulants. He had satisfied himself that it was the hyoscyamine in this treatment which had a restraining effect upon the movements in paralysis agitans. But it was especially in cases of mental trouble that hyoscyamine was of great benefit. In insanity with hallucinatory symptoms, especially in the early stage before the patient could be taken to an asylum, hyoscyamine would do much toward restraining him, and, it would seem, aided in cutting short the disease. He was very careful to give no more of the drug than was absolutely necessary, and he combined it with bromide of potassium, which increased its effect. He had never seen a hypnotic effect from hyoscyamine.

Dr. Thomson's experience with hyoscyamine, almost from the beginning, had rather prejudiced him against it. One of the first cases in which he had employed it was that of a judge troubled with insomnia. The next day he was unable to hold court, and had bladder symptoms, etc. He had found it useful in asthma with considerable dilatation of the right side of the heart, without bronchitis, but a congested state of the lungs. He had employed it in facial neuralgia, headaches, and various neurasthenic conditions, but had nothing definite to say about its effects. One patient with paralysis agitans was benefited by it among many with whom it was a failure.

Dr. Kellogg had used hyoscyamine in cases of mental excitement; it had not proved the sedative he had supposed it would, but it controlled muscular excitement. He had failed to get any hypnotic effect from it. He had not been favorably impressed with its after-effect in acute mania.

Dr. H. S. Hinkley had found it serviceable in allaying maniacal excitement.

Dr. Richards had given from five to seven drops of a one-per-cent. solution in several cases of insomnia, without effect.

NEW YORK SURGICAL SOCIETY.

Meeting of October 11, 1886.

(*Concluded from page 526.*)

Laparotomy for Gunshot Wounds.—Dr. Robert Abbe gave the following history of a case:

G. H., aged fifty-three, a large and very fat man, accidentally shot himself on the morning of July 8, 1886, while drawing some article from a low cupboard; he was bending over at the time, and drew a small revolver toward him, which discharged its contents into his belly. He walked to another room and from there a distance of two blocks. He was taken to St. Luke's Hospital, reaching there at 11.30 a. m., and was seen by the speaker at 12 o'clock. There was then slight shock, with dulling of the intellect and depression, his pulse was 82, and he had vomited once; he complained of rapidly increasing abdominal pain; tympanites was not marked, but there was a full feeling about the belly. A small bullet wound was discovered in the median line, three inches above the pubes, into which a probe was passed at right angles with the surface. Eight ounces of clear, bloodless urine were withdrawn with a soft catheter.

Laparotomy was performed at 2.30 p. m. of the same day, the incision extending from two inches below the umbilicus to just above the pubes. The incision of the peritonæum, which was inflamed and lined with lymph, opened an encysted collection of about a pint of greenish watery fluid, somewhat muddy with lymph flakes and fæces. It was confined against the abdominal wall anteriorly by the matted intestines, which were already coated with a thick layer of lymph. The fluid came from a coil of small intestine centrally placed, showing two perforations, one near its attached border, the other opposite the mesenteric side; the latter discharged freely the same greenish watery fluid as that in the sac; each inspiration pumped it out in a copious jet. The perforation close to the mesentery seemed plugged up by eversion of the mucous coat, and the fluid was perfectly confined by the lymph barrier on all sides. On sponging the cavity, the wounds of the gut were readily and thoroughly closed by Culbert's suture. No other coils were found injured in this space. The intestines were now gently parted, and it was readily demonstrated that there was no general peritonitis, for the portion of each coil facing the inflamed sac was red and heavily coated with lymph, while the free sides were uninflamed and retained their luster. Another piece of small intestine, with a double perforation from side to side, was found somewhat below the large collection of fluid just described. It also was isolated by plastic adhesions between neighboring coils, and contained a small amount of feculent inflammatory fluid. The parts involved were clean, and these two perforations were sutured. No other wounds being seen, a rapid and careful survey of the intestine from the duodenum to the colon was made. The handling of the bowel was done mostly within the abdominal cavity. Warm sponges wet with corrosive-sublimate solution were quickly applied to any coils that escaped. There was no further injury of the bowel. A final inspection of the pelvis showed a perforation of the peritonæum between the bladder and rectum, which in this subject was underlaid by fat an inch thick. The wound was small and not inflamed. It was evident no urine or fæces had escaped to set up irritation. A probe passed downward and backward an inch or so, but gave no further clew to the direction of the bullet. It seemed probable that the missile had overshot the bladder, and, presumably traversing the rectum, imbedded itself in the sacrum. There had been no bleeding into the peritoneal cavity, and the loops of intestine drawn from the pelvis were free from all signs of inflammation. The fifth wound was sutured and the peritoneal cavity sponged out with care, Dr. McBurney assisting. Sponges were thrust down into the pelvis and about the kidneys, but returned quite as dry as when introduced, showing that no fluid had leaked in during the operation. The pelvis was drained by a Thomas's glass tube emerging at the lower end of the wound, which was otherwise treated as usual. Before the patient was removed from the table a soft catheter was introduced into the bladder and two or three ounces of clear urine were drawn. The wound looked as if it had been made with a ·22-inch bullet. The patient did not react well from the anæsthesia, but remained in a somnolent condition, his breathing being characteristic of pulmonary œdema. He was restless, and had to be tied in bed. His pulse was intermittent and not strong. A catheter being passed at 7 o'clock, no urine was found in the bladder. He was freely stimulated with whisky and digitalis, and the heart's action was greatly improved. A cold-water coil was placed over the abdomen. At 11 p. m. his pulse could scarcely be felt at the wrist, though it had been fairly good a few moments before. Prompt stimulation brought it up, yet soon afterward he was taken with a short convulsive attack, tossing about the bed and throwing his arms about, and suddenly ceased breathing at 11.15 p. m.

From the time of the operation the patient seemed to be laboring under the strain of pulmonary œdema, breathing oppressively with more and more coarse râles and labored, shallow inspiration. This, with the semicoma and suppression of urine and the final fatal convulsion, had led the speaker to assign uræmia as the real cause of death.

At the autopsy, the peritonæum was found intensely hyperæmic and showing recently exuded lymph. The cavity contained twelve ounces of purulent fluid. There were two wounds in the lower portion of the jejunum opposite each other, and carefully sutured. About seven feet above these there were two other wounds opposite each other, also carefully sutured. The intestines had not been wounded elsewhere. The mucous membrane was intensely congested. That of the large intestine was deeply pigmented. The ball was found in the basin when the intestines were cleaned. The kidneys were normal in size. They seemed to contain some fat in the cortices, and were moderately hyperæmic. There was a penetrating wound in the roof of the bladder, which was carefully sutured. An incision two inches in length was made in the roof of the organ to the left of the wound, and showed the bladder to contain about an ounce of muddy-colored urine. The organ was then carefully removed and slit up through the anterior wall, through the prostatic urethra, and an area of intense hyperæmia half an inch in diameter was seen at the outlet of the right ureter. The cavities of the heart were dilated; the valves were competent, the aortic and mitral valves being moderately thickened. On microscopical examination, the muscular fiber of the heart was found granular; the transverse striæ were obliterated very generally, and there were free globules seen in the cell-fiber. The interstitial fat was increased. The kidneys were hyperæmic, with some atrophied glomeruli. There was very little increase of the fibrous tissue and epithelium in the convoluted tubes, which were granular and in places fatty.

Regarding the fluid found after death in the cavity of the abdomen, two important points were to be noted: 1. It was like the peritoneal secretion in severe acute peritonitis, but had a shade of green about it that suggested to the speaker the possibility that he had left some fluid, and that it had lurked in the loins or between folds of intestine not reached by sponging. 2. The fluid was found in the lumbar region of the abdomen at the autopsy, and the sponging had certainly swept into this section before the abdomen was closed. The bullet was lodged in the bladder all the time, and, as soft catheters were used, it was not discovered. The point of impact on the posterior bladder-wall was bruised but not lacerated.

Dr. J. C. Hutchison remarked that some years ago, while he was attending a medical meeting in New Orleans, a case was reported in which the number of intestinal gunshot wounds was astonishing, but complete recovery had occurred. He could not remember the exact number of the wounds.

Dr. Bull presumed that the urine would generally be bloody if the bladder had been wounded, and yet in one case, although clear urine was drawn, at the post-mortem an ounce of bloody urine was found in the bladder.

Supravaginal Amputation of the Uterus for Fibromata.—Dr. Lange showed a specimen removed, about four months ago, from a lady thirty-five years of age. The tumor consisted of two main portions. The larger was of about the size of a man's head, and had a pedunculated insertion on the upper part of the uterus. It had first to be cut away above and an elastic ligature applied in order to allow of access to the smaller portion, which was of about the size of two fists, and presented a broad insertion in front and to the right of the uterus, having developed below the peritonæum. In his way of operating he had this time adopted Horter and Schroeder's method of treating the pedicle. The elastic ligature was definitively removed after sewing up the stump with catgut and silk sutures. The operation lasted more than three hours. The patient finally made a good recovery after some disagreeable and critical disturbances.

Almost immediately after the operation she suffered from an acute nephritis, for which he could assign no cause. An enormous number of casts appeared in the urine, but in about a week the urine was normal. It had been examined before the operation repeatedly, and had never shown any abnormity. Iodoform had been left in the abdominal cavity in very small quantity. Perhaps the protracted ether narcosis had some relation with this renal affection.

The patient had also an umbilical hernia before the laparotomy, which was at the same time cured by peritoneal suture. The speaker called special attention to the condition of the right Fallopian tube. It was so much dilated that it looked almost like a filled gut, and when he cut across it, after double ligation, and saw its greenish mucous content, for a moment he thought that he had cut across the gut, the field of operation being so inaccessible in consequence of numerous adhesions.

Ovarian and Tubo-ovarian Cysts.—Dr. Lange gave the histories of two cases having this in common, that the tumors were of moderate size, situated on the right side, and resting with a broad base between the layers of the broad ligament, without in any way showing the formation of a pedicle. In both, the internal surface of the sac showed papillary formations. Both operations were done in such a way that the tumor was gradually shelled out of its peritoneal covering, due care being taken to prevent hæmorrhage by ligatures including masses of tissue. In one case the peritonæum was thin and could not be completely preserved. In the other it was fastened to the lower part of the abdominal wound and the parietal peritonæum in such a way that the peritoneal cavity was entirely shut off. In the first, this peritoneal partition was incomplete. In both cases the wound surface in the depth of the peritonæum was filled loosely with iodoform gauze, which was removed on the second or third day, to be replaced by less gauze and finally a drainage-tube. In this way gradual diminution of the cavity took place, but in the case in which the closure had been imperfect a fistula had remained, through which, so far, some coarse silk sutures had been discharged and more were to come out. The patient moved about without much discomfort. The specimen from this latter case presented the rare variety of tubo-ovarian cyst, the Fallopian tube being in free communication with the inside of the cystic sac. Its canal was found dilated, the mucous membrane hypertrophied, and the contents a bloody mucus. The contents of the cyst itself, at a time when a puncture was made, several months previous to the radical operation, were clear, yellowish, and thin, and contained a great number of cholesterin crystals.

The other case had the following interesting history: The patient, after having recovered from the operation sufficiently, went to the Catskill Mountains, suffering from unmistakable tuberculosis of the lungs. About four months after the operation the speaker was called to see her in consultation with Dr. Chubb, of Palenville. Three days previous, symptoms of obstruction of the intestine had suddenly developed, apparently after an indigestion. The obstruction was complete, and stercoraceous vomiting had occurred repeatedly. Without much delay the speaker brought the patient to New York, and, after having tried the stomach-pump and carbonic-acid enemata without success, performed laparotomy, on the evening of September 17th. The obstruction was due to constriction of a loop of intestine of about the size of a duck's egg by a sharp peritoneal band which spread between two points near the attachment of the mesentery to the small intestine. Under this band a coil of intestine had apparently slipped, and was so tightly strangulated that it looked almost gangrenous. Around it there was a small collection of brownish bloody fluid, as in cases of strangulated hernia. There was no connection with the original field of operation. The peritoneal sac remaining after the ovariotomy had shrunk to a small, hard lump. Some adhesions of the omentum to it were removed. Numerous deposits of tubercles were found spread over the peritonæum, and there was a larger cheesy nodule within the omentum. No abdominal complication followed the operation, and the function of the intestine was resumed in about forty-five days and had since remained normal. During the second week, however, the lung trouble became more serious, and the formation of a cavity in the upper lobe of the right lung could be clearly made out. The condition of the patient now, four weeks after the operation, was tolerably good, though no doubt she would die of tuberculosis.

In answer to questions, Dr. Lange stated that the application of the iodoform gauze had been different in the three cases. In one the wound was left open at the upper portion; in another it was left open below for about two inches; in still another the peritonæum was sutured and formed a sort of pouch at the situation of the wound, and the gauze was simply laid in. It was removed on the third day, and new dressings were applied as long as secretions remained, a long forceps being used for this purpose. The result was that contraction of the cavity gradually occurred until the wound was entirely healed. In one of the cases there yet remained a fistulous opening, which, he thought, would soon close.

BROOKLYN PATHOLOGICAL SOCIETY.

Meeting of March 25, 1886.

The President, Dr. B. F. Westbrook, in the Chair;
Dr. A. H. P. Leuf, Secretary.

A Peculiar Case of Pregnancy.—Dr. Walter J. Corcoran related the following history: In the last of August, 1885, Mrs. V. applied at St. Mary's Hospital for the repair of a lacerated cervix. Her last child had been born two years before, after a tedious labor, terminated by the forceps. Since that time she had been under constant local treatment for "ulceration of the womb," etc., by several physicians, the last of whom recognized the true condition and sent her to the hospital for operation. Since the birth of her child menstruation had occurred only at intervals of four and five months, the last time being in June. This was the only noteworthy symptom connected with the case. Examination showed an extensive bilateral laceration, the uterus large and soft, and five inches in depth. She was put on the usual preparatory treatment.

About the middle of September the laceration was closed by Dr. Byrne. During the operation it was noticed that the tissues were unusually soft, and that there was a very free oozing from the raw surfaces, though no large vessels were cut. The period of repair was normal, and in two weeks the sutures were removed and union was found to be perfect. When the sound was introduced it passed five inches. Thinking that it might possibly have passed into a dilated tube, the sound was well curved and rotated in the cavity with the same result. To reduce the size of the uterus, which was supposed to be in a condition of exaggerated subinvolution, a paste composed of iodine, iodide of potassium, ergotin, and glycerin, was ordered to be introduced into the uterine cavity twice a week by means of Dr. Byrne's intra-uterine applicator, and fifteen minims of ergot were given three times a day. This treatment was continued about four weeks, with no result whatever. After each introduction of the paste, membranous shreds came away, as is the usual result. There was no colic, no ergotism. In the last week in October, after the accustomed application had been made, the patient calmly announced that she had milk in her breasts. This statement first aroused the almost impossible suspicion that the enlargement of the uterus was due to pregnancy, even despite the manipulations it had undergone. A careful examination was then made to settle this point, but none of the positive signs of pregnancy could be found. The sound *had* passed (it was not passed again) in the median line to a depth of over five inches. The patient's abdominal walls were very thick and very lax, so that a large fold could be grasped in the hand. The uterine tumor was all in the right side, not extending, or but very little, across the median line (although the sound passed in the center) and reaching half way to the umbilicus. Ballottement, rhythmic contractions, placental bruit, fœtal heart-sounds, were all absent or could not be detected. There had been amenorrhœa since June, but during the previous two years she had menstruated only at intervals of four and five months. There was no nausea or other sympathetic disturbance. There was a slight areola, also a secretion in the breasts. If she was pregnant, she was in the beginning of the fifth month. She had been subject to constant local treatment. The sound had been occasionally used to determine the depth of the uterus. In the third month a bilateral laceration of the cervix had been repaired, and during this operation there was a large loss of blood and the uterus was drawn down by a spreading double tenaculum opening in the cervical canal. A strongly curved sound had been freely rotated in the cavity, not a drop of blood following its use. A compound which caused exfoliation of the lining membrane had been introduced a number of times, and she had taken fifteen minims of ergot three times a day for nearly a month. Yet there was a strong suspicion of pregnancy, possibly extra-uterine, or in one horn of a double uterus.

No diagnosis was made, and developments were awaited. It was needless to say that further medication ceased. Soon after this the patient reported that as soon as she stopped her medicine (ergot) the movements, which before were very ill-defined, became much stronger. The uterine tumor became gradually more central, and about the middle of November the fœtal heart-sounds were heard. Ballottement was obtained, not through the cervix, but anteriorly through the body of the uterus, and the fœtus was undoubtedly in the uterus. Dr. Byrne saw the patient and confirmed this opinion. On January 4th, during a severe coughing spell, the funis was projected from the vulva, and, although it was replaced and retained within the uterus, she was delivered the following night of a still-born child of about seven and a half months' development. The epidermis was slightly macerated and peeled off the scrotum and anterior aspect of the thighs. The placenta was attached to the right side and was exceedingly soft and friable.

Dr. A. H. P. Leuf remarked that he had had a somewhat similar experience, which was too good to keep. Some four months ago he had been called to see a woman of forty-five years, presumably at the menopause for nearly two years, as indicated by the irregular menstruation during that time, and its total cessation for four or five months. She thought she was pregnant, but was uncertain. She was the mother of seven or eight children. The usual signs of her other pregnancies were absent except lacking menstrual discharges and some abdominal enlargement. This tumefaction was on the right side just above the brim of the pelvis. It was a little sensitive on pressure, and occasionally caused pain spontaneously. A careful examination of the uterus admitted of a positive demonstration, even to the husband, who was present, that uterine pregnancy was utterly impossible. The probe entered the uterus along the uterine wall to the fundus, and was withdrawn along the posterior wall. It was again passed up on one side, swept around, and brought back on the other. A bimanual examination demonstrated the uterus to be freely movable and only slightly elongated. The possibility of an intra-uterine pregnancy was most positively denied, and a fear expressed that the abdominal tumor might be an extra-uterine pregnancy. She was not seen again, but her brother reported that she continued to suffer occasional pain, there was still no appearance of the menses, and the patient was troubled with mental uneasiness about her future condition. The brother was urged to send her around for re-examination. While the speaker was making a professional visit to the oldest child of this woman, and upon her being questioned as to her present condition, she stepped over to a bed, drew aside a cover, and exhibited a two-weeks-old baby. She was not again examined. The baby was one she had been normally delivered of by a midwife. In all probability the membranes were firmly attached to the uterine walls to within the distance from the os to which the probe had penetrated. An anterior uterine fibroid might have led to the error following the bimanual examination. These cases simply taught us the ease with which such errors might at times be made and yet not the least blame attach to the physician.

A Case of Acute Miliary Tuberculosis of the Lungs and Genito-urinary Tract.—Dr. Leuf presented the following history furnished by Dr. John Horn, of St. Mary's Hospital: "Karl S., aged thirty-five, single, tailor, came to the hospital on March 2d, very feeble and much emaciated. He complained of nausea, from which he had suffered every morning; occasionally he had fever and chills. He had masturbated frequently—as often as five times a day on three or four occasions. Last December, during one of these exciting moments, he had attempted to relieve himself by masturbation, but the semen would not flow, and he said that after that time he had rapidly lost flesh and strength. During his stay at the hospital his temperature varied between 101° and 104° F.; there was no cough or expectoration or pain of any kind. He rapidly failed, had an intestinal hæmorrhage on the twelfth day, and died the next." Upon post-mortem examination, Dr. Leuf found the body markedly emaciated. Both pleuræ were adherent throughout. An empyemic cavity, triangular in shape and about a centimetre in diameter, was found on the lower and outer side of the right lower lobe. The right upper lobe was solid with tubercular infiltration, part of which was becoming cheesy. The middle lobe was similarly affected, but not so far advanced. The lower lobe was congested and slightly infiltrated with tubercles. The left upper and lower lobes were also solid with tubercles, excepting a small cavity in the apex. The heart was normal but flaccid. The pancreas and spleen appeared as usual. The liver was firm and pale. The stomach was distended with gas, and the intestines were markedly anæmic. The right kidney was enlarged, its pelvis dilated, and the ureter thickened and dilated. Almost the entire kidney was tubercular, with nearly the entire mucous membrane breaking down and exfoliating. A cyst over two centimetres in diameter was found in the upper part of the left kidney. Tubercular deposits were found in the center of this kidney involving the pyramid and cortex, being most marked at the pyramid's base. The entire mucous membrane of the bladder was thickened with tubercles and cheesy material, and its surface was in a state of total disintegration. The base of the viscus contained a heap of *débris*, presumably from the bladder-wall and right ureter and renal pelvis. The right testis was of double the normal size, and almost entirely tubercular. The left was atrophied and softened.

A Specimen of Sacculated Bladder.—Dr. Leuf presented a specimen, with the following comment: A sacculated bladder, also known as *appendix vesicæ*, was not a common occurrence. It was due to a separation of the muscular fibers of the vesical wall, thus permitting an extrusion of the mucous membrane. The increased pressure that determined this condition was due to urinary retention, stricture, tumors, and obstructions to the outflow of urine generally. The protruding portion might become quite large, as in the specimen presented, when its average diameter was nearly seven centimetres. The orifice was usually small, with thickened edges, because of the crowding of the marginal fibers and their hypertrophy. On the specimen shown the opening measured a little less than one centimetre in diameter.

The Effects of Disease of the Nasal Passages upon other Portions of the Respiratory Tract.—A paper with this title was read by Dr. T. R. French. [See p. 533.]

Dr. J. H. Sterling thought that Dr. French had laid hardly enough stress on the objections to mouth breathing. He believed it to be the cause of much trouble. In many cases it was due to partial and undetected nasal obstructions. He related a case, then under his care, of a woman with bronchial asthma and double facial neuralgia and swelling. Nothing was visible in her nares. A slight local application, though, to the nares would increase the asthma and the neuralgia. Yet, if kept up for a number of times, this treatment proved very beneficial. She was better then than she had been in eight years. There was no nasal obstruction, and still the breathing was through the nose. He thought these cases were occasionally encountered. He had always found cocaine injurious in hay fever, because of the subsequent swelling of the membrane to which it was applied, although at first it relieved. He had seen cases relieved by destruction of tissue. He did not like cocaine.

Dr. R. G. Eccles related the case of a man with asthma, whose attacks came on instantly, and were only relieved by his going at once out into the open air. It was supposed that the pollen of some grasses caused hay fever. The speaker did not consider that a rational inference. The quantity was too small, and there was no chance of increase. When grass was cut, it was covered with the *Bacillus subtilus*, and this might be the cause. He simply threw this out as a suggestion. He thought that all who used cocaine were agreed that, instead of congesting, it had the opposite effect. Some preparations seemed to cause congestion, but he thought that was caused by additions to the fluid to preserve it.

Dr. Sterling replied that, in his experience, the anæmia following an application of cocaine was always succeeded by a congestion and tumefaction of the mucous membrane to which the application had been made. Ofttimes there was more hæmorrhage in these cases than usual, and this he believed to be due to the after-effects of the use of cocaine. He would like to know Dr. French's experience.

Dr. Eliza M. Mosher inquired if Dr. French ever made use of any mechanical appliance in mouth breathing? She thought many children breathed through the mouth because of short upper lips. Was there any appliance to use in these cases, and was it advisable?

Dr. French said that there were three ways in which cocaine had been proved to be of the greatest value when used in the nose. First, for diagnostic purposes; second, to obtund sensibility preparatory to the application of destructive agents to the nasal mucous membrane; and, third, in arresting the inflammatory process in acute coryza. When a weak solution of this drug was applied to the lining membrane of the nose, the tissues contracted almost immediately and exposed to view the entire nasal chambers. This action was a very important one, for it not only enabled us to determine the nature and seat of the disease, but also permitted the application of remedies and the direction of instruments with a greater degree of accuracy than was possible under almost any other circumstances. In addition to this, its local anæsthetic action enabled us to make painless applications of destructive agents. He had frequently been able to destroy hypertrophied tissue in the nasal passages of children in this way. Again, in many cases, the application of a 2- or a 4-per cent. solution of cocaine would arrest the inflammatory process in acute coryza. In others the symptoms were relieved, while in others still, perhaps the majority of cases, because of the swelling which often occurred a few hours after the application of the remedy, to which Dr. Sterling had referred, the trouble was greatly aggravated. With the hæmostatic action of cocaine he had not been impressed, but he had not observed that unusual bleeding occurred in the part to which it had been applied.

In reply to Dr. Mosher, Dr. French said that, though subjects with short upper lips commonly breathed through the mouth, such a condition was usually the result rather than the cause of the habit. Ability to breathe through the nose could be easily tested by keeping the mouth closed for a time. If in this way, or by inspection with the aid of the nasal speculum, the nasal chambers were found to be large enough to permit the passage of a sufficient amount of air, an attempt should be made to keep the mouth closed during sleep. For this purpose he was in the habit of using a material known as "wash blonde." It was a kind of "illusion." A strip about four inches wide and of sufficient length was placed under the chin and the ends were tied at the top of the head. To prevent this from slipping, a narrower strip was passed around the head, across the forehead, and tied behind. The two strips could then be fastened together with a few stitches or safety-pins. In this way the jaws might be held together. The material was quite elastic and could, as a rule, be worn without discomfort. As the habit of breathing through the mouth was apt to cause dryness of the throat, the comfort derived from wearing this head-dress was often very great.

Book Notices.

Analysis of the Urine, with Special Reference to the Diseases of the Genito-urinary Organs. By K. B. Hofmann, Professor in the University of Gratz, and R. Ultzmann, Docent in the University of Vienna. Translated by T. Barton Brune, A. M., M. D., etc., and H. Holbrook Curtis, Ph. B., M. D., etc. Second Edition, revised and enlarged. New York: D. Appleton & Co., 1886. Pp. 310. [Price, $2.]

The many improvements that have been made in the art of urinary examination since 1878 make a second edition of the work of Hofmann and Ultzmann particularly desirable. The translators have, as before, executed their work in a most thorough and satisfactory manner, while the publishers have done everything to make the book pleasing. The paper and type are all that could be desired by the most enthusiastic ophthalmologist.

After an introductory chapter on the Histology of the Urinary

Organs, in which sufficient is given to refresh the memory of the student, the authors proceed to give a very detailed and accurate account of the physical and chemical characteristics of the urine. This is followed by a chapter on the Reagents and Apparatus for the Approximative Determination of the Urine Constituents, wherein sufficient directions are given to enable the beginner to fit up his case for urinary analysis. The details of the treatment of the subject of quantitative determination it is not necessary to give. We may pass at once to the sections on Diagnosis. Under the head of General Diagnosis is a synopsis of the more important changes that occur in the urine in febrile, inflammatory, and other diseases. In it the practitioner will find many valuable hints. This is succeeded by a chapter on the Diagnosis of the Diseases of the Urinary Apparatus. The subject of albuminuria in all its phases is most fully and satisfactorily discussed; and many directions are given the observance of which will enable examiners to come to sound conclusions. The account of the various diseases and their symptoms, while somewhat abridged, is carefully written and suggestive. The authors do not confine themselves to a simple enumeration of the urinary signs, but give some attention to the collateral symptoms where those are of importance. The description of Professor Ultzmann's saccharimeter is followed by eight very beautiful plates showing the morphological constituents of the urine. Taken as a whole, this is probably the best work we have, of moderate compass.

Microbes, Ferments, and Molds. By E. L. Trouessart. With One Hundred and Seven Illustrations. New York: D. Appleton & Co., 1886. Pp. xii–314. [International Scientific Series.]

Although this book is written in a style adapted to the comprehension of the general reader, it is one that may be read to advantage by any medical man who is not an advanced student of mycology. The commoner microphytes are treated of both in their relations to pathology and in their connection with agriculture, food products, etc., and it is interesting to observe upon how many of the necessaries and luxuries of life they exert an influence. It is consoling to us as Americans to note M. Trouessart's inclination to acquit our parasites in some measure of the damage done to the vine in France of late years. He is rather disposed to attribute the attacks of the *Phylloxera* and other like fungi to the ruinous policy of enfeebling the vines by forcing a crop from them year after year without ever renewing them.

There is some forcible writing in the book. For example, the author's argument in support of the germ theory of disease is the best we have ever seen in print, and his delineation of the differences between the movements of *Bacterium termo* and those of the ciliated or flagellated *Infusoria* is exceedingly graphic. It is perhaps natural that a person treating of the subject from M. Trouessart's point of view should side, as he seems to, with those who affirm the parasitic origin of alopecia areata, but we think it will generally be regarded by dermatologists as an error. We have noticed some verbal slips here and there, but they are such as the reader can readily correct. Altogether, the book is unusually interesting and instructive.

La psychologie de l'enfant: l'enfant de trois à sept ans. Par Bernard Perez. Paris: Félix Alcan, 1886. Pp. 307.

In the face of the ever-increasing complications of modern life, in view of the special functional qualifications which society exacts from the individual, and because of the elaborate preliminary training of the members of society which this state of things makes necessary, education becomes the burning question of the hour. Till within a comparatively recent period our educational systems have been constructed on a purely utilitarian basis, with no other quality than its rank empiricism to recommend it. Thus, we have asked ourselves what the mind of the child ought to assimilate, instead of how it performs its functions, and how the latter are developed and modified by the processes of growth. To-day we have grown wiser; and as a consequence we look *into* the mind of the child, with a view to ascertaining how and what we can put into it. For this great advance we are undoubtedly indebted to the progress made in psychology. Viewed from this standpoint, as well as from the position of the philosopher, the work before us can not fail to interest and to instruct. We have carefully examined M. Perez's excellent book, and we have no hesitancy in saying that his contribution to infantile psychology will certainly occupy an honorable place among the similar productions of Sikorski, Berra, Ferri, Vierordt, Uffelmann, Simmonowiez, and Pollock. The student of mental diseases will find herein much suggestive matter, while all who are seeking for a scientific basis for modern pedagogics are sure to be greatly assisted by a perusal of it.

La limonea cloroidrica nell' ultima pandemia di colera. Esame delle statistische del Dottor Romeo a Marsiglia, e del Dottor Virgilio a Pizzone a Volturno, pel Dottore Cav. Ottavio de Stefano. Con una appendice de altre statistische ed un esame critico di quelle pubblicate dal Professor Cantani. Napoli, 1885. Pp. 4 to 136.

The object of this monograph is to advocate the specific prophylactic and curative virtues of hydrochloric acid, diluted in the form of "lemonade," in epidemic cholera. The remedy in question, adopted by Dr. Romeo in the epidemic of 1866, has been accepted and eulogized with much controversial enthusiasm by several of his confrères, who, in the present publication, "pool" their statistical issues in support of his theory and practice. Starting from the premise that the primal and essential cause of all the phenomena of cholera is a loss of water through the evacuations, the writers allege for "limonea cloroidrica" the property, possessed by no other mineral acid, of almost instantly arresting the purging and vomiting, and aborting the disease even in its most fulminant phase; restoring to the gastric mucosa the power of absorbing the water which serves as its vehicle, and thus bringing about immediate convalescence. The statistical tables given by Dr. Romeo and Dr. Virgilio of patients treated by this method in 1884 indicate a mortality of less than 12 per cent., and Dr. Romeo's record for 1885 shows a death-rate under 6·5 per cent., but, as the tabulation includes cases of "sporadic cholera," "cholerine," and "choleraic diarrhœa," as well as of cholera asphyxia, some allowance must be made for the "personal equation" of the reporters, and the skeptically minded may still remain in doubt whether "limonea cloroidrica" merits a place so high above all other mineral acids which have had their advocates in the treatment of cholera, and whether the rôle of Romeo will involve the last appearance of the "starved apothecary."

Drainage for Health; or Easy Lessons in Sanitary Science. By Joseph Wilson, M. D. Second Edition, with Important Additions. Philadelphia: P. Blakiston, Son, & Co., 1886. Pp. 74.

The first and principal part of this book contains, as we noticed at its original appearance, some useful practical hints concerning soil-drainage; as an epitome of scientific information, "prepared with a view of meeting the wants of sanitary engineers," it hardly justifies the more pretentious import of its sub-title. An author who, at the present day, insists that the most important function of sewers is "to drain the soil so as to render cellars partly under ground possible," and whose ideas of household plumbing arrangements are such as are figured in the remarkable illustrations which embellish this book, can not expect a very numerous following among educated engineers or sanitarians; and his suggestion that manufacturing wastes containing lead, arsenic, mercury, and other metals, as ordinarily discharged, "form about the same inorganic salts that are always present in all good spring-water," may be received with some hesitation by physicians. Nevertheless, a work of this sort, even if inaccurate, may perform a useful mission by inducing the casual reader to inquire into the sanitary defects of his environment, and to seek competent advice for their removal.

Transactions of the College of Physicians of Philadelphia. Third Series. Volume the Eighth. Philadelphia: P. Blakiston, Son, & Co., 1886. Pp. lx–460.

The present volume contains the papers read before the college from November, 1884, to June, 1886, inclusive. These number thirty-four, and fifteen are illustrated. The subjects in several instances belong to the domain of scientific investigation rather than to that of every-day practice, and thus the collection is well balanced, and will maintain the established scientific standing of the college. The editor, Dr. J. Ewing Mears, Recorder, is entitled to honorable mention for the manifest faithfulness with which he has performed his work. The limits of this notice will not permit special reference to the papers, a large number of which have already appeared in medical journals. The general appearance of the volume is creditable alike to the college and to the publishers.

The Medical Annual; A Record and Review of the Year's Progress in Medicine, Surgery, and General Science. Pp. 236. And the Practitioner's Index, A Work of Reference for Medical Practitioners. 1886. London: Henry Kimpton. Pp. 266.

In this little annual there is a vast amount of conglomerate facts derived from varied sources and coming from a large list of contributors, most of whom are well known to the medical and scientific world. Despite the eminent positions and high-sounding titles of the authors, the result of their labors can not be said to be satisfactory. The book has attempted too much, and has done too little. The mass of information it contains covers too extensive a field, and is too fragmentary and too poorly arranged to be of any service to the "busy practitioner"—a being whose welfare and enlightenment book-makers of the present day have so much at heart.

GENERAL LITERARY NOTES.

Among recent foreign publications we note the following:

J. F. Bergmann, Wiesbaden.—R. Maly u. R. Andreasch, "Jahresb. über die Fortschritte der Thierchemie," 1885. (18*M.*)

Fischer, Berlin.—A. Hartmann, "Typen der verschiedenen Formen von Schwerhörigkeit graphisch dargestellt." (3*M.*) —— C. Lorenz, "Führer durch d. naturwissensch. Berlin." (2*M.*)

Heuser, Neuwied.—T. Huperz, "Die Lungengymnastik." 2d ed. (2*M.*)

Hof- u. Staatsdruckerei, Vienna.—"Belehrung über die aus Anlass der Choleragefahr zu beobachtenden Massregeln." (0*M.* 10.)

A. Hölder, Vienna.—J. Langl u. C. R. Langer von Edenberg, "Das menschliche Skelet. Farbige Wandtafel mit illustrirter textlicher Erläuterung." (8*M.* 60.)

M. Perles, Vienna.—M. Heitler, "Ueber die Indicationen chirurgischer Eingriffe bei internen Krankheiten." (1*M.* 80.)

A. Pichler's Ww. & Sohn, Vienna.—R. Nauss, "Ansteckende Krankheiten in der Schule." (1*M.* 60.)

J. Springer, Berlin.—"Verzeichniss der Büchersammlung des kaiserl. Gesundheitsamtes." (6*M.*)

H. Steinitz, Berlin.—P. Berger, "Kur für Magere nach diätetischen Grundsätzen." (1*M.* 50.)

Urban & Schwarzenberg, Vienna.—M. Scheimpflug, "Die Heilanstalten für scrophulöse Kinder." (1*M.* 60.)

F. C. W. Vogel, Leipsic.—H. von Ziemssen, "Handbuch d. speciellen Pathologie u. Therapie." 2d vol., 3d part, 3d ed. (6*M.* 80.) —— M. J. Oertel, "Zusätze u. Erörterungen z. allgem. Therapie d. Kreislaufsstörungen." (1*M.* 60.)

A. Zimmer, Berlin.—Messner, "Die chronische Stuhlverstopfung mit bes. Berücksichtigung des Hämorrhoidalleidens u. deren Heilung." 2d ed. (1*M.*)

C. Collini, Florence.—V. Grazzi, "Manuale di otologia." (8*l.*)

A. Cortellezzi, Mortara.—P. Longo, "Conferenze popolari sul colera" (2*l.*)

E. Torrini, Siena.—G. Chiarugi, "La forma del cervello umano e le variazioni correlative del cranio e della superficie cerebrale." (3*l.*)

BOOKS AND PAMPHLETS RECEIVED.

The "Medical News" Visiting-List, 1887. Philadelphia: Lea Brothers & Co., 1886.

Medical Directory of the City of New York. Published under the Auspices of the Medical Society of the County of New York. 1886.

Congrès périodique international des sciences médicales. 8me session, Copenhague, 1884. Compte-rendu, publié au nom du bureau par C. Lange, Secrétaire-général. Copenhague: F. Hegel et Fils, 1886. Pp. (Tome i) xlvii–137. (Tome ii) ix–210. (Tome iii) x–158. (Tome iv) viii–131.

A Manual of Obstetrics. By A. F. A. King, A. M., M. D., Professor of Obstetrics and Diseases of Women and Children in the Medical Department of the Columbian University, Washington, D. C., etc. With One Hundred and Two Illustrations. Third Edition. Philadelphia: Lea Brothers & Co., 1886. Pp. xxiii–25 to 379.

In Memoriam. Austin Flint, M. D., LL. D., James Marion Sims, M. D., LL. D. By Wesley M. Carpenter, M. D., of New York.

Rupture of Uterus during Pregnancy; Porro's Operation; Cure. Translated by Robert T. Wilson, M. D., etc., and Cara S. Harvey, A. R. C. P. [Reprinted from the "Virginia Medical Monthly."]

Erysipelas and Puerperal Fever. By A. Gusserow. Translated from "Archiv f. Gynäkologie," by Robert T. Wilson, M. D., and William B. Canfield, A. M., M. D.

Hand-book of Practical Medicine. By Dr. Hermann Eichhorst, Professor of Special Pathology and Therapeutics and Director of the University Medical Clinic at Zurich. Volume III. Diseases of the Nerves, Muscles, and Skin. One Hundred and Fifty-seven Wood Engravings. New York: William Wood & Co., 1886. Pp. viii–390. [Wood's Library of Standard Medical Authors.]

Miscellany.

Lactopeptine.—In a communication to the "Medical Brief," entitled "Congenital Hereditary Atonic Dyspepsia," Dr. R. Walker Beers, of Angola, La., says:

"During a practice of twenty years I have prescribed lactopeptine to patients of all ages, and have never been disappointed in its action when indicated. But I desire to speak in particular of its action in a case of congenital hereditary atonic dyspepsia in an infant, to whom I began to administer this remedy on the third day after birth. Mrs. H. L. S., Langside, Miss., was delivered of a male child in whom there were manifested well-marked symptoms of atonic dyspepsia. The mother had been a victim of dyspepsia from girlhood, and had inherited the malady from her mother. The infant was put to the breast a few hours after birth, and nursed readily, but almost immediately rejected the milk. Repeated trials all resulted in vomiting, followed by exhaustion. Other articles of food were tried, including cow's milk, etc., without improvement. The child was in great danger of starvation. On the third day I began the administration of lactopeptine. The effect was immediate and almost miraculous. I ordered one sixteenth of the adult dose to be dissolved in about two ounces of breast milk (drawn from a robust, healthy wet-nurse) and administered every two hours and a half. There was no more rejection of milk—except the usual vomiting of curdled milk, to relieve the crowded state of the stomach, which occurred occasionally, after the first ten days. Condensed milk, cow's milk (properly diluted and sweetened), Mellin's food, boiled bread (pap), were, after a while, substituted for breast milk, but always with lactopeptine. A steady improvement was manifest from the beginning, and kept up during the first dentition, which process was gone through with in a most satisfactory manner. No untoward diarrhœa or intestinal disturbance characterized this period, and at ten months the child was virtually cured of its dyspepsia, and could eat and digest ordinary food such as children of that age may do in good health. The parents of the child believe firmly (as I do) that lactopeptine saved their infant.

"In cholera infantum, in diarrhœa, and in all the disturbances of the alimentary canal, during dentition and early infant life, I find lactopeptine an ever-effective and reliable remedy. In adult dyspepsia, all are now familiar with its beneficial effects; but I should be glad if the profession would be induced to try it in the vomitings, diarrhœas, and dyspepsias of infancy. I recall several babies whose lives I believe I could have saved had I known ten years ago what I do now of the ready adaptability of lactopeptine to infants' ailments."

Concerning Champagne.—The great value of pure champagne in medical practice has long been attested by the best authorities, and at this late date needs scarcely to be alluded to. For instance, in his work on "Food and Dietetics," Dr. Pavy, a very high authority on the subjects of which it treats, says: "Champagne is characterized in its effects upon the system by the rapidity of its action as a stimulant and restorative, and is a useful wine for exciting the flagging powers in cases of exhaustion. It also has a tendency to allay irritability of the stomach, and in some cases of vomiting may be found to be retained when other stimulants are rejected."

The no less esteemed Dr. Thomas King Chambers, in his well known lectures on "The Renewal of Life," expresses the opinion that thoroughly good champagne exhilarates more, is easier digested, and does the good without the harm better than any of its rivals.

Professor Austin Flint, in his standard treatise on "The Physiology of Man," states that it is often the best diffusible stimulant that can be employed in certain diseases which demand prompt and vigorous support of the vital powers. But, although champagne has been so long and highly esteemed, sufficient attention has not been paid to the composition of the wine. In order that it may be of the most efficient service, champagne should contain but a comparatively small proportion of spirits. Thus says Dr. King Chambers: "Of sparkling wines, good champagne is by far the wholesomest, and, with a minimum of alcohol, possesses remarkable exhilarating power from the rapid absorption of its vinous ether diffused by the liberated carbonic acid."

The lamented Dr. Francis E. Anstie, the eminent clinician and founder of the "Practitioner," speaking of champagne, says that a low alcoholic strength of wine, together with the presence of carbonic acid, is often particularly useful.

The *Académie de médecine* of Paris resolved at a recent sitting that, from an exclusively hygienic point of view, it considered the alcoholizing of wines injurious.

Dr. J. Swinburne, formerly health officer of the Port of New York, also expresses the opinion that champagne containing the smallest percentage of spirits is the most wholesome.

In this connection it is of interest to learn that Professor R. Ogden Doremus, of Bellevue Hospital Medical College, having recently had occasion to investigate the question of healthful beverages, has made chemical analyses of the most prominent brands of champagne, all the samples of which were purchased of Messrs. Park & Tilford. He reports that he finds G. H. Mumm & Co.'s "extra dry" to contain in a marked degree less alcohol than any of the others, and he does not hesitate therefore to cordially commend it not only for its purity, but as the most wholesome of the champagnes. The house of G. H. Mumm & Co. is an old and reliable one, and the firm have quite recently been appointed by royal warrants Purveyors to Her Majesty Queen Victoria and the Prince of Wales.

The New York Academy of Medicine.—Next Thursday evening the annual discourse will be delivered by Dr. William H. Draper. The occasion is a public one, and invitations will be sent by the librarian to persons to whom he is requested to send them by any Fellow of the Academy.

The Guild of St. Luke the Evangelist and Physician, the object of which is stated to be "to promote and defend the Catholic faith, especially among members of the medical profession," will hold a meeting at Calvary Church next Friday evening, to which physicians and medical students are cordially invited.

The New York County Medical Association.—At the meeting to be held next Monday evening, Dr. T. Gaillard Thomas will read a paper entitled "Laparotomy as a Diagnostic Resource." Dr. Ira B. Read will present specimens of aneurysm of the aorta, and make remarks on the subject. We are asked to state that Fellows of the New York State Medical Association are specially invited to be present.

The Proposed Rush Monument.—The committee in charge of the subscription has issued a circular which concludes as follows:

"It may be approximately estimated that $40,000 will be sufficient to erect a monument that will be fitting and unexceptionable as a work of art, and it does not admit of question that this sum can be speedily raised among the 106,000 physicians and students of medicine in the United States. That no one may be debarred the privilege of contributing, a subscription-rate of one dollar from each individual has been determined upon, and you are accordingly solicited to remit that amount to the member of the committee representing the State, Territory, or national service to which you belong, who will also receive voluntary donations of such other sums as may be tendered by persons interested in this national undertaking."

The New York member of the committee is Dr. A. N. Bell, and the treasurer is Dr. Joseph M. Toner, of Washington.

THERAPEUTICAL NOTES.

The Galvanic Cautery in the Treatment of Membranous Dysmenorrhœa.—At the recent meeting of the *Association française pour l'avancement des sciences* ("Ann. de gynéc."), M. Landowski expressed the opinion that, while membranous dysmenorrhœa generally depended on a particular diathetic state or on general debility, local treatment should not be neglected. He stated that for some time past he had been successful with the galvanic cautery, which, heated to a dull red, he applied to the endometrium, the cervical canal having previously been dilated. He makes the application five or six days after the cessation of a menstrual flow, and the patient remains in bed for about eight days.

Iodine in the Treatment of Arterial Sclerosis.—At the same meeting ("Bull. gén. de thérap."), M. Henri Huchard spoke of the necessity of treating the effects of arterial sclerosis upon the heart—the sudden attacks of asystole which occur in persons affected with this lesion, as well as in diabetic and gouty persons not suspected of having heart disease. Iodide of sodium should be given, to the amount of from fifteen to forty-five grains a day, for one, two, or three years continuously. The potassium iodide should not be used, as it has a tendency to lead to renal manifestations.

Cocaine in the Hypodermic Treatment of Syphilis.—Mandelbaum ("Monatsh. f. prakt. Dermatol."; "Ctrlbl. f. Chir.") recommends the addition of cocaine to the mercurial solution, and states that it renders the injections nearly or quite painless. The following solution is used for one injection:

Cocaine hydrochloride....	$\frac{3}{4}$ grain;
Mercury dicyanide........................	$\frac{15}{100}$ "
Distilled water.........................	15 drops.

Original Communications.

A DISCUSSION OF THE GENERAL PRINCIPLES INVOLVED IN THE OPERATION OF REMOVAL OF THE UTERINE APPENDAGES.*

By LAWSON TAIT, F. R. C. S., Birmingham, England,
PRESIDENT OF THE BRITISH GYNÆCOLOGICAL SOCIETY, ETC.

I am induced to raise a discussion upon the general principles involved in the operation of removal of the uterine appendages before the Medical Society of London for two reasons. In the first place, it appears to me that the dignified position occupied by this society, and its perfect freedom, so far as freedom can be obtained in such a matter, from anything like prejudice in favor of old views on the one hand, or a desire for improper innovation on the other, give a guarantee that such a discussion as this may be carried on before its members with a greater likelihood of a judicial consideration, and a greater certainty of arriving at a reliable and accurate verdict. Certainly we may expect this to be the case rather than if the discussion were taking place either in a society formed of men whose views became crystallized at a time when this recent innovation had no clear hold on the profession, or, on the other hand, before a society which has enrolled among its members leading men in all parts of this country who have been concerned in the development of this new enterprise.

The second reason for my appearing here is that we have had a paper from the pen of Sir Spencer Wells in the "International Journal of the Medical Sciences" for the past month, which indicates a much nearer approach to a common understanding upon this most important question than has yet appeared possible between the two schools of gynæcology, the old and the new, and I really am almost tempted to confine what I have to say to the points raised by Sir Spencer Wells in that paper, and to differ but little from them, for, in spite of the many passages of arms which have occurred upon this subject, and in spite of the hard words which have been used on both sides concerning our various views, no one is more anxious than I am to arrive at a conclusion which shall be satisfactory and honorable to my profession and safe to the patients committed to our care. I therefore desire to speak in terms of the strongest commendation concerning the paper which has been contributed by Sir Spencer Wells, and if I make a single qualification in that praise it will be confined to its peroration, where I think Sir Spencer has forgotten two things. The first is that part of his own history in which, until some twelve or thirteen years ago, he, being the only operator for ovarian tumors who had anything like a reasonable measure of success, performed an enormous number of operations which only eighteen or twenty years ago were looked upon by men in the very front ranks of our profession as little short of butcheries. He gathered these large numbers to his operating-table by reason of his relative success, and he must not forget that the same principle may possibly and charitably be extended to other operations in the hands of younger men, and that the numbers of these operations, which seem to him to be open to some question by their largeness, may be due to exactly the same cause which drew to him his own great clientele.

The second is that the number of these operations may seem to him to be actually very great, but in any such operation the numbers can be only relative; and it is hardly worth while to discuss at first whether the numbers be too great or too small. Let us settle the principles upon which the operations are to be performed, and then each operator will be called upon in his turn to justify the tables which he creates upon these admitted principles. In these discussions the uniform line of argument has been rather the reverse, quarreling with the numbers and not listening to one word that was to be said in favor of the general principles upon which these numbers rested. Sir Spencer Wells is clearly at fault in such a line of criticism.

Under such conditions let me raise the first general principle concerned in these operations, namely, the one upon which their nomenclature is to be determined. The writers of various leading articles in medical newspapers within the last few months have made an endeavor to confer upon these various operations the objectionable term of "spaying," and this choice was made clearly not for any purpose of scientific assistance in the settlement of any one of the numerous questions which arise concerning these operations, or for any other purpose whatever than to prove, if by any possibility it could prove, personally offensive to the men engaged in this kind of practice, and not only personally offensive, but personally hurtful to them.

One well-known leader-writer upon this subject in the most prominent medical journal of our country told us that all operations must have their nomenclature decided by their anatomical relations alone, and that no kind of intention on the part of the operator or method of his, and no kind of motive on which the operation was based, could in the least degree influence the name by which it was to be called. But the moment it was pointed out that, if I am to be called a "spayer" because I remove the uterine appendages, then an obstetric physician—my friend, for example, Dr. John Williams—must be called an "abortion monger," because he occasionally induces premature labor. The offensive incorrectness of the word "spaying" was in this way easily settled, and I hope we have heard the last of it.

There comes now the introduction into the English literature of the word "castration," as copied from the German and French, and it forms the title of the articles contributed to the "International Journal" by Sir Spencer Wells, Dr. Hegar, and Dr. Battey. This phrase is just as much open to objection as the other, although its use can hardly be regarded as being burdened with the same intentional affront. But let any one take down any volume of surgery upon which he can lay his hands, and turn to the definition of the operation of castration, and he will find that it is retained exclusively for the male. Now, an operation so simple as castration in the male must not, for strong anatomical reasons, be confounded with the operation of a far more serious and far more difficult kind when it is intended to remove the essential organs of a female patient. The anatomical relations of the removal of the human testicle and the human ovary are as opposite as things can well be. Further, it is quite open to doubt that the ovary is the analogue to the testicle. There is no such operation that I have ever heard of in the male corresponding to the operation for removing the Fallopian tubes in the female, and as castration is confined absolutely, in the English language, to the simple removal of the testicle, if it is to be extended to the female it must be confined to the operation of removing an ovary, and to the removal of an ovary which is perfectly healthy. If it is not to be confined to the removal of an ovary which is perfectly healthy, then it must become the generic term for the removal of the ovary and ovaries under all conceivable circumstances—for this simple reason, that if it is not so, then you will have to draw such an artificial and absurd line as Hegar attempts when he says that "we understand by the term castration the removal of normal or degenerated ovaries, not, however, including those which have developed into large tumors." Where are we to draw a line as to what is a large tumor not to be called castration, and a small tumor which is to be so called? Some of the most terrible operations of the class generally "called ovariotomies" are for small dermoid tumors not much bigger than an orange, which give rise to intolerable pain and abscesses throughout the pelvis. Is such an operation as this—one of the most serious abdominal sections which we may be called upon to perform—is this to be called castration? The thing is too absurd to be listened to for a moment. Again, an overwhelmingly large number of my own operations are performed for removal of a diseased tube, in which the ovary may be so little affected, or, even if considerably affected, would be so rapidly cured by arrest of the periodic congestion of the pelvic organs by arrest of the function of menstruation, that its removal is a matter of the utmost indifference. If I remove one suppurating Fallopian tube or both tubes so affected, and leave both ovaries, as I very often do, how can it be called a case of castration when I do not comply with the prime fact which is expressed in the use of this word? Also let me further point out that the word castration had its origin in the mutilation of the lower animals for the purpose of our food supply, and I think it is a matter of regret that it ever has been introduced into human surgery. As applied to animals, it means removal of both testicles; as applied to a man with a diseased testicle, it probably, in the vast majority of instances, refers only to the removal of one. If applied to the female patient in the case of bleeding myomata, it must of necessity mean the double operation. If it refers to a case of pyosalpinx, it may mean either the single or double. Now the nomenclature which I have suggested and for which I must plead for a favorable consideration is the use of the term "removal of the uterine appendages" to cover every kind of operation of that nature. I would yield a question upon which I hold some views for the destruction of the word "ovariotomy," and almost for the destruction of the word "oophorectomy," but I almost think that neither of these words would be necessary if the generic term "removal of the uterine appendages" were adopted, for you have only to use this phrase and to specify the disease for which the operation is done, and in one or two instances to specify the extent to which the removal has been carried, and the classification becomes a matter of the greatest ease. Thus I am habituated in my published tables to speak of removal of the uterine appendages "for myoma." That means the double operation, for a single operation would be an absurdity unless there was a congenital absence of the appendages on one side. Then I speak of removal of the uterine appendages for "chronic inflammatory disease," that may be either unilateral or bilateral, or it may mean removal of one tube or both tubes, as I have said, without the ovaries. Then, again, we speak of removal of the uterine appendages for "reflex conditions," and they of course again necessarily involve the double operation; then we have the separate groups of removal of one ovary for cystoma, removal of both ovaries for cystoma, the removal of parovarian cysts, and hysterectomy, and in this way we get something like a common logical nomenclature under which by far the greater number of abdominal sections can be ranged, and operations in connection with both ovaries and tubes can be counted in either group. There are, of course, as in every kind of classification in every subject of human study, instances where it is with the utmost difficulty that you can say into which group they really ought to go. Thus, for example, you may have a large myoma, and you begin your operation for the purpose of removing the uterine appendages to arrest the bleeding of that myoma. Then when you get inside you may find two large cystic ovaries, larger even than the myoma, and you are puzzled to say whether you have removed two cystic ovaries or whether you have removed the uterine appendages for a myoma, and some kind of latitude must be allowed to each tabulator as to how he groups such borderland cases. To show how difficult classification by nomenclature really is, Dr. Meadows has raised a difficulty by alluding to the fact, which really can not be disputed if we examine the question by the strictest canon, that the uterus is an appendage to the ovary, and not the ovary an appendage to the uterus. But this is carrying the matter unnecessarily far. For generations we have spoken of the uterus and its appendages, and we may continue to do so without harm. If we reversed the nomenclature in this particular we should have to construct a theoretically bifid uterus and regard the half of a woman, and the corresponding half of some man, as the proper annexa to every human ovary.

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* Read before the Medical Society of London, November 1, 1886.

The next general question in connection with this subject upon which I want to speak is raised by Sir Spencer Wells in the first paragraph of his paper, where it is noted as "Castration in Mental and Nervous Diseases." Although I have a very large share in Sir Spencer Wells's conclusion, I must say I regret that he has said so very little upon removal of the uterine appendages in mental and nervous diseases, and has said such a very great deal upon their removal for other conditions. Speaking of its application *without distinction of cases*, he tells us that "this operation has an import which attaches to no other surgical operation. It not only puts in jeopardy the life of the individual on whom it is performed, but it involves the certainty of the non-production of the whole series of beings that might result from man's obedience to the first command of his Creator, 'be fruitful and multiply.' Its potential fatality as regards the subject sinks into insignificance when compared with the absolute extinguishment of one line of the species." Sir Spencer seems to regard this injunction as a "twelfth commandment." With the eleven others mankind has not been remarkable for compliance. In this, however, he has erred on the side of excess of obedience.

Here, also, I regret to say that I think Sir Spencer Wells has given a very insufficient consideration to the one great fact which has been laid down by almost every writer without exception upon this subject, that in the great majority—I think in 95 per cent.—of the cases of various kinds which are suitable for this operation sterility has already been secured by the disease for which the operation is performed. He says himself concerning myomata, for example, that "they interfere with fecundity." I think it must be admitted by any one who knows anything about these diseases that in the great majority of cases they absolutely destroy the possibility of maternity. I have a great belief in the opinions of women upon all matters concerning their own sex. Here is the opinion of a very clever woman on this subject, Dr. Mary Dixon Jones, of Brooklyn. She has operated successfully in a number of cases by removal of the appendages, and says: "But lately there is a great hue and cry about the possible future baby. They do not stop to think of the countless number of women who are barren and childless for years from various forms of uterine disease—'a drop may stop a dynasty.' When women are suffering from hopelessly diseased tubes and ovaries, they must not be 'unsexed'; they must continue years in torment and misery and inability for any kind of employment or avocation, because perhaps in the diseased ovary there may be a healthy follicle, which may contain a healthy ovum, which may find its way through a possibly diseased tube, and *possibly* find other favorable conditions—like Mrs. Toodles, who purchased a door-plate on which was cut the name of Thompson, because she might have a daughter, who might grow up and might marry a man by that name. Removing diseased uterine appendages is not unsexing a woman; it is restoring her from helpless invalidism to all the possibilities and opportunities of life and labor. It is not taking away the possibility of her having children—that has already been done by disease; it is only removing a cause of suffering" (New York "Medical Record," August 21, 1886).

Many writers say that myoma is not in any way a fatal disease. Dr. Keith persists in his belief that it has no risk to life at all; but if so, why does he publish such long tables of hysterectomies with a mortality of 12 or 13 per cent.? The sufferings and risks of myoma have been, in my opinion, greatly overlooked, and when we see a patient suffering intense pain and profuse loss at each menstrual period, with a tumor growing and occurring at such an age that it is likely to grow, why should we hesitate to grant her relief? We can secure that relief for the patient and secure the diminution or disappearance of the growth by the arrest of that bleeding, with a certainty as great as anything of which we can speak in surgery, by means of an operation which now has its mortality reduced to less than 2 per cent. It is a matter for the patient's judgment to decide as to whether she will or will not adopt that line of treatment, and it is not to be wondered at that, under such circumstances, the patients accept the treatment, and that large numbers of them come from all parts of the world to submit to it. Therefore I hold with the belief contained in the general conclusions at the end of Sir Spencer Wells's article, that "the operation, which I shall call removal of the uterine appendages, is one which should be advised in some cases of uterine fibroids, and in uncontrollable uterine hæmorrhage." On this principle Sir Spencer and I are in accord.

I accept again with equal pleasure his second conclusion, that "it is to be resorted to in certain malformations of the genital organs, deformities of the pelvis, and accidental obstructions of the vagina." Of course, here again sterility is absolutely involved, and we clear away the great bulk of the argument against the operation which Sir Spencer Wells asserts in the first sentence of his paper.

Sir Spencer Wells's third conclusion is one upon which I think a very great deal might be said. It is that "the right to use this operation is very limited in cases of ovarian dysmenorrhœa or neuralgia, and only when they have resisted all other treatment, and life or reason is endangered." I, for one, have become extremely skeptical that there is such a thing as ovarian dysmenorrhœa, because when ovaries are bound down by adhesions due to old perimetritis the uterus is nearly always similarly bound down. I am now disposed to believe that, although much pain will be given during the development of a follicle, its rupture, and the dehiscence of the ovum when the ovaries are so bound down, yet that the intense pain is not ovarian, but uterine and tubal. Such cases I believe there are where life is not threatened, but they do resist all other kinds of treatment, and reason is often endangered by the sufferings which the patients undergo. Therefore, as the removal of the uterine appendages and arrest of menstruation is the only permanent and complete cure for such patients, the only means of securing physiological rest and complete rest for them, I am disposed to accept Sir Spencer Wells's conclusion, but to extend it largely to certain cases which seem to have escaped his notice. These are precisely the kind of cases which occur with greater frequency in the lower ranks of life. It will happen frequently to have such a case sent one in a servant girl, or a governess, or a girl who has been kept standing the best days of her young life behind a counter, with the story of intense menstrual suffering and absolute inability in many of them to keep any one situation more than a few months by reason of the fact that their employers soon get tired of their recurrent invalidism. Remove the uterine appendages and stop the suffering, and you give such a patient a new life, because previously it was impossible for her to earn her living and do her work in her ordinary avocation. If the whole question is put to her, as it ought to be with perfect sincerity and plainness, if her sufferings are genuine, she will accept the operation as her last resource. I entirely agree with Sir Spencer Wells, and it has been my guiding rule and practice in such cases to do the operation only when they have resisted all other treatment. But the treatment by rest and methods of luxury, which is really the only treatment likely to be successful, is an absolute impossibility in the cases of any save those who are well endowed with the good things of this life. For the poorer classes there is nothing but the operation which will give them permanent security in the obstinate class of cases.

Sir Spencer Wells's fourth conclusion is that "in nearly all cases of nervous excitement and madness it is inadmissible." There I am, for the present at least, disposed to agree with him. I have tried it, as I have said in my publications on this subject, in six cases of pronounced menstrual epilepsy—that is to say, in cases of epilepsy in which the attacks were confined to the menstrual periods. The patients were all benefited most undoubtedly, but none of them were cured. They were all improved in health, and I think that, if I were to judge for myself as a patient of that kind, I should elect to have the operation done; but I could not, for one, continue to act upon Battey's principles, and therefore I have given up the practice of performing operations in nervous cases entirely, and I shall only resume it when I have had the ground made perfectly and completely clear upon the numerous other and far more important questions involved in it.

The fifth conclusion recorded by Sir Spencer Wells is that "it should never be done without the consent of a sane patient, to whom its consequences have been explained." I agree with the utmost emphasis that no operation of this nor of any other kind ought to be done without the most complete explanation of it to the patient—that is to say, that it should be made as clear as it possibly can be according to his or her degree of intelligence, and no such words as "spaying" or "castration" ought to be used to the public, because, if the intention is to convey the true nature and intention of the operation, such words as those convey meanings to the ignorant which are absolutely contrary to the intentions and purposes of this operation.

Finally, the conclusion, number six, put on record by Sir Spencer Wells, that "the incision of morbid ovaries and appendages should be distinguished from oophorectomy, and it should not be done without the authority of consultation, as in most other cases of abdominal section," is one which I most clearly emphasize. But I want to draw Sir Spencer Wells's attention to this fact, that he has argued absolutely contrary to the chief force of his own conclusion, that the excision of morbid ovaries and appendages should be distinguished from oophorectomy, and that chiefly in connection with my own work. He is kind enough to allude to me in the following way, the first time my work has attracted even the most passing notice from Sir Spencer Wells's pen, and I must protest against the complete misrepresentation to which he subjects me—in fact, he makes me advocate and practice what I have unceasingly raised my voice against. He is speaking all through about what he calls "oophorectomy," or "castration," and it is clear he means what Battey most unfortunately called "normal ovariotomy."

"On the 1st of August, 1872, a few days after Hegar's operation, Tait, of Birmingham, is reported to have also removed two ovaries from a woman who was sinking from irrepressible hæmorrhages due to uterine enlargement or tumor. She recovered, and was better two years afterward. In the course of the next year it is also recorded that he did three more similar operations. In two of these cases he took away only one ovary. That was imperfect castration—not the complete operation of Hegar. The want of appreciation of Hegar's motive for the operation is evident." Here Sir Spencer forcibly illustrates my argument against the introduction of the word "castration," for it has led him in this case into a most absurd mistake. Had he turned to the table of cases from which he has quoted—apparently from memory—he would have seen that the first date was February 11, 1872, nearly six months before Hegar's case. He would also have seen that in the three cases in which he says I did not appreciate Hegar's motive I removed one ovary because it was diseased, and left the other because it was healthy; and in all three I cured my patients. Curiously enough, Sir Spencer saw one of these cases with me. The principle involved was wholly different from that independently arrived at and acted upon by Hegar and myself—within five days of each other—concerning the treatment of bleeding myoma. The principle in these three cases mistaken by Sir Spencer was the primary new departure of removing an ovary for pain or distress independently of the size of the diseased organ, and independently of life being threatened. In the first of these cases the ovary was only as big as a hen's egg, and was the subject of chronic inflammation and abscess. Its removal entirely relieved the patient of pain. In any case I must protest against these three cases being called "oophorectomies," or "castrations," or "normal ovariotomies," or "Battey's operations," or any other name which does not mean that they were cases of removal of ovaries just as much diseased as if they were the biggest cystomata which could be found in our lists.

Still speaking of "oophorectomy," Sir Spencer says: "Tait, of Birmingham, has been identified with it from the beginning. He has modified it and extended its application. Many others have followed in his steps. Some have tried to outstrip him. The ovaries and their appendages now go the same way; and the meshes of the physical, mental, and moral network of reasons why the operation should be done are so closely woven that few cases of a perplexing nature, that can anyhow be connected with the generative organs or functions, have a chance of escaping laparotomy or something more. . . . The oophorectomists of civilization touch hands with the aboriginal spayers of New Zealand."

This kind of writing reminds me of nothing so much as Dean Ramsay's Scotch laird, who, when in a rage, went out into the street and swore "at large." It has no other intent. But I object altogether to have my name mixed up with such nonsense when I have, over and over again, protested against the doctrines and practices here, by implication, fathered upon me. Sir Spencer Wells's confusion arises out of his erroneous nomenclature, and a want of precision on his part in recognizing clearly the logical effect of principles which he himself, to a very large extent, admits. To follow these principles carefully is a much more difficult matter than Sir Spencer imagines, and nearly every new writer on the subject agrees that "removal of the appendages," "oophorectomy," "castration," "normal ovariotomy," or whatever it may be called, is a uniform proceeding, simple alike in its character and its performance, and for its performance requiring unskilled hands and a slipshod understanding of it. Therefore I have been continually crying out warnings which have not been listened to. Perhaps those of Sir Spencer Wells may have more heed paid to them, but I object to him directing them at me.

In defense of this protest let me quote from my original paper which Sir Spencer heard at the International Congress in 1881, and of which I gave him at the time a printed copy. Speaking of the cases operated upon for chronic irreparable inflammatory disease, I said that "in four out of thirty-two cases it was impossible to complete the operation, and that operations of this kind were far more difficult than operations for cystoma." All my subsequent experience confirms this. Speaking at Edinburgh, in February last, in answer to several writers who had made the same confusion as that perpetrated by Sir Spencer Wells, I said: "'*Normal ovariotomy*' is an operation requiring no skill, little experience, and hardly any judgment, and therefore has been extensively and, I fear, somewhat indiscriminately practiced. I have protested again and again against it, yet many whose voices are no louder against it than my own blame me for it, accuse me of doing it, and generally get confused over the whole subject. I desire once more to say that, save when the seat of such organic disease as will explain genuine suffering, the uterine appendages ought not to be removed; and that those who attribute all the pelvic aches and ails of women to the ovaries and tubes, and rush in to remove them, are dangerous people. I don't say they are dishonest, but I say they are misguided. This kind of laparotomy epidemic is no worse, however, and certainly not more harmful, than the tenotomy epidemic which spread all over the world when Dieffenbach first introduced his brilliant and serviceable operations. Every oblique eye was made more oblique on another axis, and many club-feet were hopelessly destroyed —results to be deplored, but common enough in all instances of human progress. New things, especially new drugs, are always done to death, and I greatly fear that indiscretion with such a new drug as chloral has done more harm than all the surgical indiscretions collectively."

Again, writing in answer to Dr. Henry C. Coe, of New York, who also was guilty of the same mixing up of cases which I do not approve of with those in which I advocate operative proceedings, I wrote as follows in the "American Journal of the Medical Sciences" of September last: "I think I have great reason to complain of the confusion into which Dr. Henry C. Coe has fallen—a confusion which he summarizes in the seventh deduction at the end of his paper, and which he regards, he says, as legitimate. It is as follows: 'The present enthusiasm in this country in favor of Tait's operation will not endure, because it will eventually be discovered that the number of permanent cures is entirely out of proportion to the number of operations.' I wish to say that what he has described throughout his paper, with, so far as I can see, quite a small number of exceptions, is not 'Tait's operation' at all, but is an operation upon which Tait desires now, for at least the twentieth time, to enter a most earnest protest."

"I have again to protest against the use of the word 'oophorectomy,' as employed by Dr. Coe, because there has grown up associated with that name a number of vague ideas which are misleading from their very vagueness and the impossibility, which is evident everywhere, of separating and clearly defining them. Thus it is clear from Dr. Coe's paper, which is written by a pathologist ambitious of pronouncing from a pathological standpoint a decision upon a surgical question (a feat which is wholly impossible), that he has not yet achieved a complete idea of the fact that 'oophorectomy,' as he calls it, includes a lot of perfectly different things. Thus it may be an operation for a uterine myoma, or for a case of reflex trouble, as designed by Battey, and again an operation for chronic inflammatory pelvic trouble; and all these are absolutely different in every conceivable way. The pathology of the three classes is different, the theory upon which the operation is performed in each case is widely divergent from each of the other two, and, finally, the clinical histories of the patients, and the technique by which their diseases are to be relieved, present irreconcilable differences.

"Until, therefore, Dr. Coe has got this idea into his mind and drops the use of the word 'oophorectomy,' it is perfectly impossible for him to really understand the bearings of the discussion."

In a rejoinder to my letter, Dr. Coe has frankly admitted the completeness of my argument, and probably in America, at least, for the future we shall have a closer adhesion to logical statement, and I shall not be blamed for what I protest most loudly against.

At page 466 of the "International Journal" Sir Spencer Wells asks, "Who can diagnosticate the presence of irreparable disease in these out-of-the-way organs?" I answer that I did it in October, 1871, in the instance of this patient, and that I have done it hundreds of times since, have taught dozens of other men to do it, and I could teach Sir Spencer himself if he would come to Birmingham for the purpose. Some people seem to be able to teach themselves from my writings or other sources, for I am constantly getting papers sent to me with accounts of successful operations in all parts of the world, with the diagnosis previously and correctly made. Let Sir Spencer Wells read Dr. Mary Dixon Jones's article in the New York "Medical Record," and he will see how a woman can understand, recognize, and successfully treat the troubles of these out-of-the-way organs when the subject of irreparable disease. I hold in my hand the last number of the "Columbus Medical Journal," and I find there conclusive evidence from Professor Reed, of Cincinnati, that pyosalpinx exists, can be recognized, and treated in Ohio. In Germany they diagnosticate these cases. In France, India, Australia, Japan, Spain, Canada, and everywhere throughout the States the cases are found in numbers and successfully treated. How is it that Sir Spencer Wells alone confesses his inability to recognize them?

Dr. Mary Dixon Jones ends her testimony with this remarkable sentence, which I give even at the risk of a charge of egotism. "There is no advance made in modern surgery that will do more good, save more lives, or relieve more suffering, or add more to the sum of human life or human happiness, than this one operation known as 'Tait's operation.' It will save more lives than ovariotomy, because more need it."

We now come to the final point for discussion—not one of general principle, but one of detail, and therefore one which ought not to be introduced here. Its introduction is, however, inevitable, for it is the *ὕστερον* which has been misplaced for the *πρότερον*. I mean the number of cases of removal of the appendages for all sorts of motives which are performed. On this let me repeat what I have already said in Mundé's "Journal" (September, 1886):

"Upon the whole of this question I do not pretend to say that unnecessary and therefore improper operations are not being performed; unfortunately, I know they are, but it is due not to the principles of the operation, nor to anything concerning the operation itself, but simply to the inherent tendency to error which prevails in everything that is human. Everybody now seems to be desirous (especially on your side of the Atlantic) of opening the abdomen, and so long as this is the case the production of specimens which do not justify their removal will be inevitable. But when an operation is put in the hands of responsible people, whose reputation and personal existence will be made to depend upon their thoroughly understanding the principles upon which the operation should be performed, and which should not be departed from, this tendency to human error will be diminished. That it ever can be removed entirely is impossible, because unjustifiable and improper operations are just as common upon the operating table of the general hospital as they are upon that of the gynæcological department."

Of Dr. Coe's paper let me say that its title, "Is Disease of the Uterine Appendages as frequent as it has been Represented?" "reminds me very much of the characteristic statement, 'that the thing is about as big as a lump of chalk.' I do not know who has made any representation as to the frequency of disease of the uterine appendages, neither do I know in what population any statistics on the subject can be obtained. The varying frequency of operations for disease of the uterine appendages must, of course, be in the practice of different men entirely relative. In my own practice these operations are extremely frequent, because I tap the clientele of the whole world; they come, and have come, from almost every country under the sun. I can easily imagine therefore that, compared with the practice of some men who have not given so much attention to this particular department of surgery, they are enormously frequent in my practice. But even I would not venture for a moment to make any kind of statement as to what their absolute as compared with their relative frequency really is. Indeed, I have not the faintest notion. But, taking it even from the purely pathological standpoint, which is evidently that occupied by Dr. Coe, it is proved beyond doubt that their frequency is great; and not only is their frequency great, but their mortality is terrible.

"Let us take the only two investigations which have up to the present time been made from anything but a surgical standpoint. Dr. Kingston Fowler in three years found fifteen cases of pyosalpinx, leaving out of the question altogether the minor troubles which do not and can not, save by the merest accident, appear on the post-mortem table in the Middlesex Hospital, and, of these, eight had been fatal from peritonitis due to rupture of the pyosalpinx. Still more recently, and still more forcibly, comes the argument propounded by Dr. Grigg, who out of five deaths, which occurred within a certain period in the practice of the Queen Charlotte Lying-in Hospital, and these five were all the deaths that occurred in that period, found that four were due to chronic lesion of the uterine appendages. But for the careful examination made at Dr. Grigg's special request by Dr. Allchin, every one of these four cases would have been set down to ordinary puerperal fever; and how can we tell, unless more frequent post-mortem investigations are made in puerperal cases, that these murderous diseases of the appendages are not of infinitely more common occurrence than we imagine? No sooner does a woman get a tympanitic abdomen and feverish symptoms after a labor than it is the practice to immediately pronounce it a case of septicæmia, whereas my belief is, and the belief is sustained absolutely by Dr. Grigg's experience, that, if the abdomen were promptly opened and causes searched for, not only would the word septicæmia be to a large extent banished, but we might be able to save lives which up to the present moment have been sacrificed."

I remember very well when Lawrence, Tyler Smith, Syme, and Miller united in saying that all abdominal surgery was abominable surgery, and even harder things than that. Then there came a time when Wells was doing his hundreds of abdominal sections, and nobody else touching the work in anything but a tentative way. Suppose in 1868 some one asserted it was not the principle of ovariotomy that was wrong, but the fact that Mr. Spencer Wells did so many. Mr. Wells's answer would have been, Come and see the cases done. The objector would have had two courses—either to accept the invitation, or refuse it. If he had accepted, he would have been converted; if he had refused, he would have been disregarded. I have offered the same challenge to all my objectors. Those who accept the challenge go away and do likewise. Those who decline I disregard.

It is pleasant to find, after all this, that, upon the general question that such operations should not be done without consultation, I am perfectly agreed with Sir Spencer Wells. But, then, I must plead that consultations in some cases are eminently farcical, because the eminent persons summoned to the interview arrive there prejudiced against such operations as we are now discussing. In order that there may be no mistake as to my meaning, I shall give cases and names. Some months ago I was called to see an American lady at one of the hotels in London. She had come over specially for the purpose of having my opinion on the proposal that her appendages should be removed on account of intolerable suffering, for which she had been under the care of all the gynæcologists of Europe and America, from Marion Sims downward, for twenty-five years. In order that everything should be done that caution could suggest, Dr. Matthews Duncan and Dr. John Williams as physicians, and Dr. Bantock and myself as surgeons, met in conjunction with Dr. Freeman and another gentleman who was concerned in the case. I satisfied myself very soon that the operation ought to be done, but all I could get out of Dr. Duncan was that there was nothing the matter with the patient, that she should be put under the care of some good doctor, and made to dance for twelve months. Dr. Williams was more cautious, but not more lucid. The operation was accepted by the patient and friends, and was performed by Dr. Keith, who, in a letter to me, abundantly justified its performance by the conditions found in the pelvis.

All I can say is, that, in such a case as this, there is not a practitioner in the Midland district known to me who would have withheld his sanction to the operation proposed.

Again, Sir Spencer Wells seems to me similarly prejudiced. I have in my pocket a letter from him to the family doctor of a lady who has a myoma as big as a baby's head. Six months ago it was a small thing in the pelvis; eighteen months ago there were no symptoms at all. She bleeds profusely at her periods and suffers greatly, and I agreed with her doctor in advising removal of the appendages. By her friends' advice she went to see Sir Spencer, who expressed his opinion that "at her age—forty-two—it is not likely to increase much, and, after the cessation of the catamenia, will undergo senile atrophy. So I would certainly not operate at present." Sir Spencer Wells, in such an opinion as this, is clearly imbued with the old and deterrent influence of his high ovariotomy mortality. If, in order to obtain relief from her symptoms, this patient had to run the risk of a 25-per-cent. mortality, no human eloquence could justify it, nor even, I think, with a 12½ percentage. But when I can show her that the risk is little more than one per cent., I show her relief at a price so favorable that I can only look upon her as a fool if she does not accept it. In my own district men send me such cases, with deliberate requests for operation, by the dozen. They see by past experience how much is gained at infinitely small cost. When I find Dr. Matthews Duncan and Sir Spencer Wells interfering with what I believe to be the steps proper to be taken alike for the relief of our patients and the advance of our art, I utter fervent prayers that they may soon be brought into a better light; but I also tell my patients to avoid them, and consult more reasonable men. In his paper in the "International Journal" Sir Spencer Wells says the mortality of removal of the appendages is 14·6 per cent. I know not where he gets his figures, but my own published results up to date give three deaths in about two hundred cases.

The editor of the "Medical Press and Circular" has had the rashness to say that these operations are done for the sake of the fees and fame to be obtained by them. In a proper sense this is true of everything we do, but in the improper sense, which Mr. Norton clearly intended, the insinuation is too vile for discussion.

An attempt, dictated by what I regard as the worst of all motives, which has been made in Liverpool to prejudice this question and to settle the problems of surgery in a court of law, met with an ignominious defeat. What I think of it is best given in a letter of singular power and eloquence, received by me from one of the most promising young hospital surgeons of our country.

"The other day," he writes, "I saw a small vegetable cart presided over by an old woman, and bearing on one of its panels in large, white letters, the owner's name, followed by the legend, 'APRUVED CASTRATER AND SPAYER.' By some damnable perversion of motive a few men are seeking to represent human surgery as wandering about the country in a sort of quack caravan, doing for the profit of its practitioner what this gelder is doing for his and the farmer's profit. You know what I feel about the operation, and how carefully I would hedge it around. But this outcry, and particularly Wells's paper in the 'International Journal,' so handicaps a juvenile like myself that I feel like saying to every suffering or bleeding woman who wants relief, 'Bleed, suffer, and die if you like; I won't touch you. I know I can cure you, but men you have trusted and enriched and be-titled say the diseased organs are sacred, and that the man who removes them is merely a profane seeker of gain. Go to these men and be cured, or bleed, suffer, and die unaided by a newer and better surgery than they can give you.'

"It is hard to avoid some such feeling as this in the case of a juvenile like myself," he continues. "Why are so many men with capacities for greatness so unspeakably little? Since the Liverpool business I have not done an operation of this sort. There is little satisfaction in doing an operation which one may be prosecuted for like a common swindler."

My friend has far too much courage to remain long in this state of mind, and I know he will soon return to work in which he has already achieved brilliant results, but it is the state of mind into which timid men may easily be driven and from which they may never emerge. There are, however, others of a different type, and I for one—supported as I am by the confidence of hundreds, I think I may say thousands, of my professional brethren who trust me with the lives of their most valued patients, with the lives of their own mothers and sisters and wives—I for one shall not deviate from the path I have cut out, and not all the outcry of men whom I regard as wholly prejudiced and to a large extent willfully ignorant, nor the terrors of actions for damage, nor abusive articles, in either medical or daily papers, can make me swerve from what I believe my duty alike to my profession and my race.

SURGICAL INFECTION:

IS IT A CHIMERA?*

By GEORGE R. FOWLER, M. D.,
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In a paper read before the Brooklyn Pathological Society, February 25, 1886, Dr. A. H. P. Leuf, the essayist of the evening, made essentially the following declarations:

1. There are but two methods of wound repair, the first being by primary adhesion and the second by suppuration.
2. Failure to obtain primary adhesion, and other wound complications or sequelæ, depend, not upon the absence of antiseptics, but upon some constitutional state or predisposition.
3. Those who practice antiseptic surgery neglect other and more important measures necessary for the safety and welfare of the patient.

I fail to see that this arraignment of the antiseptic treatment of wounds by Dr. Leuf has brought any new facts to the surface. The arguments advanced are the same that have been brought forward by the opponents of the antiseptic system since the first introduction of the latter. In the first place, the statement that there are but two methods of wound repair—the first being by primary adhesion and the second by suppuration—is not borne out by the experience of those who practice either of the antiseptic systems or methods. Such a statement ignores entirely the healing by granulation without suppuration under an antiseptic dressing; the organization of a clot, which may fill up a bone cavity for instance, and which likewise occurs without suppuration; and, lastly, sponge grafting. The two last certainly can not be accomplished without the most rigid antisepsis.

Let us glance for a moment at the physiology of repair: First there occurs swelling of the parts, to a greater or less extent, from capillary turgescence. From the dilated capillaries plasma exudes, which infiltrates the adjacent tissues, and, when occurring upon the cut surfaces, constitutes wound secretions. This exudation of plasma is proportionate to the amount of the local irritation, and within certain limits is essential to the needs of the reparative process, and can generally be kept within due bounds by properly protecting the wound from further irritation, and by rest and compression. If the irritation is but temporary, the increased activity in the capillaries, or active hyperæmia, soon subsides; but if the irritation continues or increases, tissue changes occur; these consist in exudation and cell-granulation. These latter always occur where the injury inflicted is sufficient to produce a solution of continuity, and are the essential agents in the reparative process, or building up of new tissue to fill up the breach. Now, anything which produces excessive irritation or prolongs the latter, leads to excessive exudation and cell-germination, and it is the over-production of these cells (the embryonic cells of Stricker), washed away from the surfaces of the wound by the excessive exudation, which constitutes suppuration. Probably such a thing as absolute primary adhesion never occurs; however closely the wound surfaces are approximated, a delicate layer of new tissue intervenes and constitutes the bond of union.

I will not undertake to enumerate the many causes of failure of union, but there can be no question that this failure may be due to very many and diverse causes. Not the least among these, in my opinion, is that which antiseptic surgeons recognize as infection by poisonous agents, and particularly by organic matter floating in the atmosphere. I presume there can be no doubt as to the existence of this organic matter in the atmospheric air, for this has been abundantly proved by Tyndall. That this largely consists of microscopic germs capable of setting up putrefactive changes in organic fluids is also capable of demonstration, and has been proved time and again. And that their effects are such as produce evil consequences has been shown by Panum, Billroth, Bergmann, Klebs, Pasteur, Koch, Loeffler, and Ogston. The presence of these germs growing in the tissues acts as a source of irritation, just as the presence of foreign substances of a macroscopic nature, such as gravel, sand, or filth of any sort, is known to. This irritation results in increased hyperæmia or afflux, excessive exudation of plasma, over-production of embryonic cells, which latter, failing to become fixed, are thrown off in the liquid plasma, and, as before stated, constitute pus; this in reality is a waste of reparative material. Inflammation may also result from this prolonged irritation, and consists in a stasis in the capillaries, an extension of the area of active hyperæmia, a slowing of the current of blood, particularly at the points nearest the irritation, where it may become arrested altogether. The white corpuscles, or leucocytes, are crowded against the walls of the capillaries, finally penetrating these, and choke up the circumvascular spaces. Exudation of liquor sanguinis, blocking of the vessels with red blood-corpuscles, and, as a result, the occurrence of redness, pain, heat, and swelling, constituting the classical picture of inflammation, now take place. All this may be directly traceable to the existence of excessive irritation, and this may as certainly be due to the presence of germs deposited in the wound as to the existence of foreign matters appreciable to the naked eye, too great tension upon sutures, insufficient drainage, or allowing "dead spaces" for the accumulation of wound secretions. To be sure, all wounds that are not treated antiseptically do not do badly, for speedy closure and direct contact of the surfaces allow but a relatively small amount of air and its contained organic matter, including germs, to find a lodgment. What few gain access are brought in direct contact with living cells which, possessing certain powers of resistance to the action of pathogenic germs, prevent their development and finally destroy them. That this occurs is an established fact, and that germs do harm in the manner I have pointed out has been equally well proved.

Professor Hamilton, in the paper alluded to by Dr. Leuf, and which appeared in the New York "Medical Record" for January 2d of this year, although pretending, and at first glance appearing, to be perfectly fair toward Lister, certainly can not be said to be just in his condemnation of

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[*] A part of the discussion upon "Surgical Infection" before the Brooklyn Pathological Society, February 25, 1886. As the paper by Dr. Leuf has not been published through the usual channel, the main points of his paper are here made to precede the discussion, in order that the reader may follow the argument intelligently.

that surgeon's theory of wound infection and its consequences, inasmuch as, without doing aught else than to call attention to the other causes for failure of primary union, he proceeds to emphasize his own disbelief in the evil effects of these noxious agents by declaring that "the various manipulations and devices for the purpose of excluding the germs . . . serve no other purpose than do the walking, talking, and gestures of the prestidigitator." And this without attempting to deny that germs do exist in the atmospheric air, or to contradict the accuracy of the results following the elaborate experiments of the investigators to whom I have already alluded. In fact, in a preceding paragraph he admits the value of antiseptics in preventing the decomposition of blood, pus, and serum.

I fail to appreciate the argument set forth by Dr. Leuf that, when primary union fails, the fault lies not with the absence of antisepsis, but with the predisposition of the patient—an inherent something which forms an insuperable barrier to rapid repair. While I am willing to admit that the existence of a well-marked dyscrasia may lead to failure of repair, just as it may lead to failure of union in a fracture, yet, if this were true to the extent stated, wounds occurring in patients afflicted with syphilis, tuberculosis, and struma might be expected to break down and suppurate almost constantly, even under antiseptic treatment. That this is not true, my own experience, as well as that of my colleagues who follow antiseptic rules in operating, clearly shows. In 1884 I visited the wards of Professor Esmarch, in Kiel, and was shown more than thirty cases of excision of the knee joint done in a rigidly antiseptic manner and without drainage. These excisions were done for destructive disease of the knee-joint, and, as one can readily believe, occurred for the most part in broken-down persons, the subjects of struma. Here certainly the treatment was handicapped to the fullest extent by the existence of a well-marked "predisposition," and yet these patients were all doing well, and primary union of the soft parts, with complete consolidation of the bony structures, was the rule, and that ordinarily under but one dressing. Volkmann, of Halle, declared to me that, so great was his faith in the antiseptic system, he believed wounds should heal without suppuration or other accident, no matter what the patient's general condition might happen to be.

It is not pretended, as stated by the essayist of the evening, that general infection is caused by the direct entrance of bacteria into the general system, although the researches of Ogston would tend to prove that micrococcus poisoning is the chief factor in the production of septicæmia and septopyæmia. The absorption of the products of decomposition from the pabulum upon which germs feed and in which they grow—in other words, the ptomaines almost invariably present in putrescent animal fluids—is, when they are absorbed in considerable quantities, sufficient to account for all the symptoms. It may be a question of bacteria poisoning, micrococcus poisoning, or ptomaine poisoning.

The subject is a vast one, and but scant justice can be done it in such a discussion as this. There are a few more points, however, to which I would beg to refer. The experience of Mr. Tait has often been alluded to. I doubt if that noted and brilliant surgeon was ever a very enthusiastic antiseptist. He tried the method very faithfully, I have no doubt, for I know him to be a painstaking and conscientious surgeon. He "tried his tea-kettle, and gave it away," thereafter getting equally good, if not better, results. But the field of surgery which he particularly cultivates and for which he has done so much is not the one in which great gain has been hoped for, even by Lister himself. The peritonæum does not seem to have that greediness, so to speak, for germs and their products evinced by other tissues, and, in fact, has recently been proved to be a much more tolerant and tractable membrane to deal with than was formerly supposed. It is in compound fractures, large incised wounds, and injuries of that class, that the differences between the old and the antiseptic treatment are the most marked. I happened to enter the profession at a time when all the great advances in surgery of this century, except the antiseptic treatment of wounds, were yet fresh in the minds of, and fully elaborated upon in the lecture-room by, the masters of the art. With all these fully impressed upon me, I strove to get the best possible attainable results. The results of the best of these earlier efforts, I assure you, can not at all compare with what is to me now an every-day experience.

I am not an advocate of the typical Lister dressing. I believe it to be cumbrous, expensive, and open to other objections as well. I believe in the application of a dressing which will allow of the free entrance of air, and thus favor the rapid desiccation of the discharges. The moss dressing of the Germans or the paper-wool dressing introduced by myself fulfills all the requirements of dry wound dressing perfectly. Of course, this is only to be applied after all so-called "dead spaces" have been provided against by drainage or suturing, and the wound has been sterilized and closed. But that Lister's or any other dressing of an antiseptic nature prevents us from knowing what is going on in the wound, is a fallacy. Baron Larrey, the elder, the great master of French surgery, as well as the equally clear-headed and successful English teacher of our art, Sir Astley Cooper, in their day declared against meddlesome surgery; and the reasons given for this are as cogent now as then. Failure of drainage, sepsis, and other untoward conditions, are quickly announced by the thermometer or by the occurrence of pain. The time occupied and material used in an antiseptic dressing are trivial matters compared to the absence of necessity of frequent changes, to say nothing of the surgeon's peace of mind when he feels the assurance that all will go well with the wound as well as the patient, and that if failure occur it is through no fault or neglect of his own. The requisites in these days of simplicity in dressing are few and inexpensive. Mercuric bichloride, or even common salt, or diluted vinegar, if nothing better is at hand, is easily obtainable, and sawdust, or absorbent paper torn into narrow strips and made into a cushion, constituting the before-mentioned paper-wool, is all that is really needful, in addition to what good surgery always requires, namely, cleanliness and proper measures for closing the wound and draining it; or, these not being deemed needful in the particular case under notice, support and compression.

The charge that those who practice antisepsis do not pay proper attention to the preparation of their patients, or become so absorbed in the antiseptic idea as to be oblivious to everything else in and about the operation, requires no refutation at my hands. So far as my observation goes of the gentlemen so accused, this argument against antiseptic treatment is based upon a purely gratuitous assumption.

I regret my inability, without encroaching unwarrantably upon the time of the society or the privileges of those who are to speak after me, to go over the ground covered by Dr. Leuf's paper more thoroughly. I have endeavored to state my own convictions and the grounds for them, and to declare to you that, in the light of the researches of experimenters in the field of bacteriological science, and the experience of those who, acting upon the suggestive results derived from these experiments, treat wounds antiseptically, in my opinion the surgeon who does not take into account every possible source of danger that may overtake his patient, including in this the noxious influences arising from the entrance of germs into the tissues, is criminally negligent, and directly responsible, both to his own conscience and to the world at large.

A SUMMARY OF HOLSTI'S VIEWS ON ARTERIO-CAPILLARY SCLEROSIS.*

By F. B. STEPHENSON, M. D.,
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The original of this article † contains about thirty-five pages, and authorities for opinions quoted are given in numerous foot-notes.‡ The author opens his paper by citing and reviewing the statements of various writers on this disease, which is known also under the names *granular atrophy of the kidney*, *arterio-capillary fibrosis*,# *Bright's disease*, etc. He sums up this *critique* by saying that there are two principal opinions among observers, the chief point in discussion being the connection between lesions of the kidney and disease of the vascular system, especially of capillaries and smaller arteries. Some view the renal disease as primary, and the vascular change as a result thereof; while others think that certain forms of granular atrophy of the kidney may be brought about by such sclerosis, which, however, is not limited to the renal vessels, but may spread over the whole arterial system.

Hugo Holsti, the author, intimates that this disease has been considered too much in a histologic way, whereas its study from a clinical aspect might be more fruitful.

The data for his paper were furnished by twenty cases, nearly all observed in the medical clinic of the University of Helsingfors.

The earlier stages of the disease cause so slight a disturbance of the general health that they usually pass unnoticed. An increased amount of urine first attracts the patient's attention. On examination, the chief thing that the physician can find is a more or less disturbed action of the heart, with hypertrophy; the pulse is ordinarily hard, resistant; the arterial walls may be thickened and abnormally bent or curved.

Although these cardio-vascular symptoms seem to be the whole sickness, yet, as Traube advises, whenever we find hypertrophy of the heart without valvular lesion, we should suspect renal atrophy, and examine the urine.

This disease may be latent ten years or more, according to the physiological state and hygienic surroundings of the person. Sooner or later, gradually or suddenly, often with some affection of slight importance in itself, a change for the worse takes place. The patient becomes lean, sallow, or yellow; retinal trouble may be found; symptoms before named become more marked. Even in this condition, however, appropriate means for building up of the general health—good food, fit exercise, etc.—are able to bring about great improvement.

Toward the last, symptoms attributed to the retention of certain constituents of the urine are observed. Constant headache, disordered sensation, œdema, dyspnœa, diarrhœa, apathy, hæmorrhage,* spasms, gradual stupor, coma, or an intercurrent acute disease in the lungs, pleura, etc., may conduct the sick one slowly to his end; an epileptoid seizure may quickly close the scene.

From the foregoing we may see that there are two well-marked divisions in the progress of this disease—one, cardio-vascular; the other, uræmic.

After this clinical consideration, the author gives the results of his examination into the pathologic anatomy as to heart-overgrowth, and the histologic change in the larger and smaller arteries. The abdominal aorta was sometimes sclerosed; but the greatest change appeared in the vessels of less and least size. The different components of the vascular walls were affected in an unequal degree. Often the intima was most involved; in other instances the muscular layer or the adventitia suffered, the remaining parts being comparatively healthy. Microscopic examination showed the walls of some small vessels so altered that they were a mere homogeneous mass, without distinction of structure.

This morbid condition was spread over the entire arterial system, although its intensity varied in different parts. It seemed quite marked at the bifurcation of the abdominal aorta, and in the coronary arteries; the pia mater was frequently affected.

Occasionally one kidney appeared relatively little changed, when in the other atrophy had reached the advanced stage known as "the small red kidney"; this the author describes in detail.

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* Read before the U. S. Naval Medical Society.

† Translated and summarized from "Om Förändringarna af de finare Artererna vid den granulära Njuratrofin och deras betydelse för denna sjukdoms Patologi." Af Hugo Holsti, Docent vid Universitetet i Helsingfors. "Nordiskt medicinískt Archiv," sjuttonde Bandet. Första Häftet. 1885.

‡ Dr. Holsti is careful to state that he founds his judgments in this investigation not upon reports, but upon his own observed cases.

Historic data on this subject may be found in an article by Dr. A. L. Loomis, under the title, "Arterio-capillary Fibrosis," printed in the "New York Medical Journal," February 20, 1886.

* This may occur in the skin and mucous membrane, simulating the so-called hæmorrhagic diseases, or diatheses.

We find a table of measurements showing the diverse amounts of thickening undergone by the vascular walls.

"Since we have seen, on the one hand, the clinical forms under which granular renal atrophy advances, and, on the other, the anatomic change coming therewith, it remains for us to try to make clear the very complicated question concerning the result and the mutual dependence of this complex of disease arising from widespread vascular sclerosis, cardiac hypertrophy, and wasting of the kidney."

Agreeing with Gull and Sutton, Dr. Holsti believes that the vascular change is the primary affection, giving rise to the others, and he does so "chiefly because the clinical progress of the disease is thus best explained." "In hypertrophy from different cause, as valvular lesion, we do not find polyuria." The headache, dizziness, rush of blood to the head, and hæmorrhages in the brain are easily comprehended as consequences of the sclerosis and hypertrophy.

The overgrown heart is long able to withstand the resistance of the hardened vessels with diminished lumen; but a time comes when the cardiac action is insufficient, over-fullness of blood in the lungs takes place, and asthma. Although this symptom may become prominent in arterio-capillary sclerosis, valvular heart trouble from other source is possible without it. Sometimes asthma occurs so early in the disease that it does not seem due to uræmia; it may also be caused by hardening and thickening of the coronary arteries.

Dyspeptic affections are better understood by the change in various branches of the abdominal aorta, as the parts they supply thus lose more or less of their customary nourishment; hence may arise anæmia, with possibly resulting ulceration, necrosis, etc. We have here, doubtless, the origin of gastric ulcer, and of so-called albuminuric retinitis.

An example of the peculiar logic used by some writers is found on the twenty-second page of the original Swedish article.

After referring critically to the theories and expressions of Thiry, Traube, Cohnheim, and others, our author concludes that we can not explain the heart's hypertrophy by disease of the kidney, either by mechanical obstruction in the vascular system thereof, or by action due to hæmic changes of renal cause; an inflammatory sclerosis of the small arteries gives rise to the cardiac enlargement and to the kidney disease.

Reference is made to the diagnosis of atheroma from renal cirrhosis. The former nearly always occurs in old people, is located especially in the larger arteries, and shows fatty and chalky matters on histological examination, whereas the latter is met with in persons about thirty years of age (two of his cases being under twenty), affects the smaller arteries more and earlier than the larger, and is an inflammatory process. Syphilis and lues are compared in like manner. This differentiation closes with the statement that the peculiar sclerosis found in granular atrophy of the kidney is not seen in any other malady.

More than seventy per centum of cases properly belonging to this disease have been incorrectly reported as affections of the brain, heart, and lungs. Renal disorder of other origin may exist quite independently.

In the opinion of our author, this cardio-vascular sclerosis, with renal atrophy, is caused by some irritant circulating in the blood and acting on the walls of the vessels, secondary lesions being produced in the kidneys, chiefly during excretion.[*] As a rule, the intima is first affected, but the outer layers do not escape. The adventitia, by reason of its histologic structure, is very apt to suffer. This inflammatory change is greatest where the blood rests longest in contact with the parts, as in the small arteries and capillaries, more particularly throughout the branches of the abdominal aorta and their vascular connexes. The changes both in the vessels and in the heart are due to previously morbid blood. The lessened capacity of distal vessels, from their thickened walls, brings on increased pressure in the larger arteries, and compensatory cardiac hypertrophy. The sclerosis in the general circulation and in the kidneys may progress at the same time without any necessary interdependence, each arising from like cause. So long as this hypertrophy and an abnormal permeability of renal vessels allow excretion of the natural constituents of the urine, the general health may be little if any disturbed. When the heart or the kidney fails, the uræmic stage begins.

From a comparative study of the symptoms and of the necroscopic condition, it results that prognosis is ordinarily somewhat better in acute uræmia than in chronic.[†]

This disease may be hereditary, or come about through the influence of personal surroundings more or less under man's control.

The facts brought to our knowledge in this paper have an evident bearing on certain habits of diet and modes of life.

ETHER, AND ITS ADMINISTRATION;

OR, ANÆSTHESIA BY ETHER.[‡]

By D. E. KEEFE, M. D.,

SPRINGFIELD, MASS.

THE WORD anæsthesia was proposed by Oliver Wendell Holmes to express a want of feeling or sensation. It includes analgesia, or insensibility to pain.[#] The idea of inducing this state occupied the minds of surgeons from the remotest times. The Chinese used a vinous tincture of mandrake (a member of the belladonna family); they also used Indian hemp, under the name of bhang, as well as *Atropa mandragora* and hyoscyamus, for the production of anæsthesia.

According to Lucius Apuleius, the ancient Greeks used similar preparations—all by the stomach. Dr. Richardson, of London, actually proved that *Atropa mandragora* would induce sleep, not for the full time alleged, but for four hours.* Theodoric, in the thirteenth century, was the first to propose anæsthesia by the inhalation of volatile substances. Humphry Davy first called attention to the inhalation of nitrous oxide; but, from imperfection of apparatus or failure of success in its application, it fell into disuse from 1800 until 1844, when its introduction was an accomplished fact, and the honor belongs to Horace Wells, of Hartford, and to American surgery. Two years later a still more potent agent was added by Morton's successful use of ether, and his administering it to a patient at the Massachusetts General Hospital in December of the same year. Thus the world is indebted to the surgeons of the United States for nitrous oxide and ether, and to Guthrie, an American, for the discovery of chloroform. This would seem to be glory enough for one generation. During my attendance at medical lectures and clinics at New York I saw ether administered at clinics given in the three regular medical colleges and at pretty much all the hospitals, under the auspices of some of the foremost surgeons of the world—men worthy our most profound respect and admiration. The patient was frequently anæsthetized before being brought into the amphitheatre. At other times the surgeon would occupy the time in explaining the nature and various steps of the operation while his assistants gave the ether. Nevertheless, it often happened, when a previous appointment could not be made, and when the operation was of such a nature that it called for but few remarks, that much valuable time was wasted, and annoying delays occurred from the long time required to induce anæsthesia. During the past few years, though many experiments were made, there has been very little real progress. It has been proposed (and, to a certain extent, practiced) to give by hypodermic injection morphine and atropine, either single or combined, before or during the administration of the ether; also to give, by the stomach, potassium bromide, and whisky, wine, or brandy, one and a half to two ounces.† Ether has been administered *per rectum*, and, though only the reintroduction of an old and disused method (Pirogoff having so used it in 1847), we were led to expect much of this latter method; but I believe it as much a thing of the past as cundurango and many other so-called cancer specifics that have been, from time to time, foisted upon the profession. Our only real progress has consisted in the publication, from time to time, in the medical journals, under the head of "Myths of Surgery," of the necessity of mixing air with ether. A few medical men, and among them Professor J. W. S. Arnold, have for some time maintained that the proper way to give ether was to completely exclude air, believing that admitting air was simply diluting the ether, lengthening the stage of excitement, compelling the patient to take a larger quantity, and thus tending more to induce nausea and vomiting. To prove his statements, Arnold experimented in a large number of cases, and never noticed any untoward symptoms after complete exclusion. Professor Lewis A. Sayre, one of the most correct and painstaking observers, applies the same reasoning to chloroform. He says: "Air is the antidote to the anæsthetic, and anæsthesia can not be produced so long as the antidote is in excess of the anæsthetic."* Notwithstanding these facts, the surgeons connected with most of our leading hospitals continue the old-fashioned rubber or towel cone and sponge, and so clumsily is ether still administered in some of the institutions of many of our large cities that a young man of my acquaintance, attending a dental college in one of them, seeing the teacher administer it, said: "Why, I can learn much more about giving ether at home than here." These facts I think a sufficient apology for consuming so much of your valuable time. If ether is administered in such a halting and uncertain fashion in our large cities, what may we expect of physicians in inland cities and towns, whose opportunities for its handling are so small by comparison? I shall now state some of my own experience, and, after giving you exact facts without color or varnish, allow you to judge as to which is the best plan. I commenced administering ether in the common way, with cone and sponge, admitting air quite freely. Though latterly familiar with Sayre's and Arnold's opinions, I felt afraid to change, and I can remember many patients over whom I worked from fifteen minutes to an hour and twenty minutes, and frequently requiring a hard struggle and four to eight ounces of ether before they submitted. Part of this delay was undoubtedly due to my timidity, and the rest to an idiosyncrasy on the part of patients, they being what are called "bad etherizers." After continuing in this way for some time, I reflected that there might be some other and better plan—one not taking so much time. The result of this plan was an entire change in my *modus operandi*. I now propose to give you a synopsis of two hundred and ten cases, taken from my note-book, of patients in my own practice. And let me here state that the records as to time required, quantity of ether used, etc., are not of my own keeping, but, in more than two thirds of the cases, were kept by a disinterested assistant for our mutual satisfaction, and with no thought of their publication.

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[*] "We know, by experiment, that we can bring about like changes first in the blood, and secondarily in the kidneys, through the introduction into the organism of such substances as cantharidin, turpentine, petroleum, etc."—HUGO HOLSTI.

[†] "Af det föregående framgår äfven, att den akuta uremin i allmänhet lemnar en något bättre prognos, ty den kan inträda, innan ännu njuratrofin skridit altför långt; den kroniska uremin antyder däremot alltid, att förstörelsen af njurväfnaden skridit till den yttorsta grad, och när denna därföre en gång fullständigt etablerat sig, är icke någon förbättring mera att vänta."—HUGO HOLSTI.

[‡] Read before the Hampden, Mass., District Medical Society, October 5, 1886.

[#] Bartholow, "Mat. Medica and Ther.," on Anæsthetics, p. 495.

These 210 cases may be divided as follows:

1. Fifty cases where old-style cone and sponge were used.
2. Five where Dr. Adams's inhaler was used.
3. Fifty where air was completely excluded.
4. One hundred and five where my new method, "open cone," was used.

The age of these patients ranged from fourteen to sixty years; average, about thirty-five; though there were one infant and three children. As a rule, there was no preparation, such as abstaining from the last meal, and the majority were in the sitting posture; and let me here remark that I consider this, though contrary to the general acceptance, a very favorable position for the administration of ether, for the blood has gravity to aid its return from the brain and lungs, mucus collecting in the pharynx will be swallowed, and the tongue is not so likely to fall back on the glottis. I anticipate that it will be urged, in opposition to this view as to position, that the heart will be obliged to force blood uphill, and hence the brain may not get enough. I reply that while this argument might have some weight if applied to chloroform, it has none with regard to ether, for in fatal cases the brain and lungs are found congested and œdematous.

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* Turnbull, "Anæsthetics and their Administration," p. 1.

† Stephen Smith, "Manual of Operative Surgery," p. 26.

* "Lectures on Orthopædic Surgery," pp. 38 and 39, Lewis A. Sayre.

It appears that in the fifty cases where the old style towel cone* and sponge were used, and air quite freely admitted, the results are: Time required, eight to forty minutes; average, fourteen minutes; quantity of ether used, three to eight ounces; average, three and a quarter ounces. Vomiting before anæsthesia very frequent, and either before or after in 60 per cent. of the cases.

The second method consisted in making a *cone* of a large, thick towel, quite stiff, of such a size that it accurately fits over nose and chin; an item of importance, no matter what method is pursued. The cone is held firmly against the patient's face from beginning to end, the object being to completely exclude all air.† The results in 50 cases where this method was tried are: Time required, average, three and a quarter minutes; quantity of ether used, average, one and seven eighths ounces. Vomiting before anæsthesia, 2 per cent; after, 14⅗ per cent.

Objections to this method of complete exclusion, also called "choking down," are:

1. Most patients make more or less serious resistance for a short time.‡

2. Generally two assistants or more are required.

3. The exertion required in holding the head renders the hands of the operator unfit for the performance of any delicate operation, provided, of course, that he also administers the ether.

4. If administered for a dentist, patients tell their friends of their choking sensations, and thus make them afraid to take it, should any of them contemplate such a step. This fact would soon make that dentist's office an unpopular one in which to take ether; and, if persisted in, would soon lessen the demand for the administrator in this particular line of professional work. Such were the considerations that led me to abandon this method and adopt my present one in the great majority of cases. It may be interesting to ask in this connection, Are we to discard the "choking-down" method, and if not, what are the cases in which it is suitable? I reply that it is suitable in the following cases—viz.: 1. In children who are too young to be made to understand that they need have no fear. 2. Hysterical women, where you expect resistance *nolens volens*, and where by reason of small muscular development that resistance is not formidable. 3. Where you have a very powerful subject, one very pugilistic, and when you have plenty of assistance. It is especially suitable in those cases where the operation is of such a nature that the dread of the ether may have no deterring influence on others, nor detriment to the physician.

My third category consisted of five cases where Dr. Adams's inhaler was used. This is in many respects a very ingenious and desirable instrument. The advantages stated for it are: 1. Time is saved. 2. Half the quantity of ether ordinarily used is saved. 3. A separate valve is provided for expiration, which saves the patient the necessity of inhaling this vitiated medium. 4. A separate opening is provided, so that saliva and mucus may run out. By observing the figures you will be able to decide whether these statements are borne out. It is, however, the best instrument for the administration of nitrous oxide with which I am acquainted.*

The results were in four cases: Time required, fifteen minutes each; ether used, two and a quarter ounces to four and a half ounces; average, three ounces; vomiting in three cases. In the fifth case, after using the inhaler thirty-eight minutes and patient showing little disposition to succumb, I discarded it and used a towel-cone instead, when sleep was induced in two minutes.

I now come to the fourth and last method—one which *I claim original to myself.* It may have been used by others, but I fail to find any mention of it in the books or medical journals. Not that it is, *prima facie*, very different from that usually employed; still, there is a difference—an essential and important difference! I bespeak your careful attention while I describe it. In the ordinary method air is admitted at all times, while in the "choking-down" method it is excluded at all times; my method resembles the former in the first part of the administration, and the latter in the remaining part. There is this difference, however: I provide a freer access of air than the sponge and cone can possibly do, for I discard the sponge and use an open cone.† I consider this of immense advantage over both the plans just mentioned. What, then, is this advantage? If the closed cone is used, it must be held a short distance from the face, the mouth and nostrils representing, so to speak, only a small segment of the cone, and the ether vapor, having a specific gravity of two and a half times as much as air, is diffused downward around the face; especially is this true during expiration, and if held down on the face, the vapor being wholly unmixed with air, it will be so irritating that, after the first sniff, the patient will cough and immediately put all the respiratory muscles in a state of tetanic rigidity, and will not breathe again till almost asphyxiated; the only resource is to remove your cone when the patient breathes nearly as much air as ether, and you are getting as much ether as air.

The open cone and sponge, if held away from the face, are open to the objection of allowing the escape of more ether into the room than the closed one; but when they are held against the face, and are of proper size, the face, acting the part of a cushion, prevents loss downward, while, on the patient's inspiring, a draft is caused through the cone; the ether, being the heavier, keeps the lowest plane and is driven by ingress of air into the lungs, accompanied by a large quantity of air. It is self-evident that a cone without a sponge has nearly as much advantage over that containing one as the latter has over the closed cone, for there is nothing but the diffusing ether to obstruct the ingress of air! Moreover, the evaporation of the ether takes place more rapidly, and there is no danger of causing liquid ether to run down the trachea, with fatal consequences. I refer to "The Chicago Medical Journal" for May, 1876, for a case in point, reported by Dr. E. L. Holmes. Another and great advantage is that the patient gets such a large percentage of air with the first inspiration, and that so intimately mixed with the ether, that the latter causes little or no irritation; moreover, he has not so keen an appreciation of a want of air, and does not stop breathing, as when it is completely excluded; you are thus enabled to gauge the tolerance of his mucous membranes at once, and, finding them tolerant, you can close your cone and exclude the air; this you can generally do after two or three inspirations, and this is just what you could not do if using the open cone and sponge without first removing your sponge, and you would remove most of the ether with it.

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* Cones made of towel and the open rubber ones are considered synonymous and as equal.

† Clark's "Manual of Surgery."

‡ Quain's "Dictionary of Medicine," p. 41.

* Since this paper was read, the S. S. White Dental Manufacturing Co., of Philadelphia, has introduced an apparatus for administering nitrous oxide which is the best yet it invented, but expensive, being listed at $12.

† The cone is made, in the usual manner, of a *large* towel folded with a newspaper next the outside layer, and thus having about four or five layers of towel inside of it on which the ether is poured; it is as widely open at one end as the other, but, since there is nothing between the sides, it can be closed at pleasure.

When I find the mucous membrane tolerant, there are but four things that will induce me to desist—viz.: 1, actual vomiting; 2, the tongue falling over the glottis; 3, respiratory paralysis; and 4, great irregularity of the heart. I think I have sufficiently explained my method of procedure, so that any candid reader can not only understand wherein it differs from the ordinary, but also appreciate its advantages.

In 105 cases where this plan was pursued the shortest time required to induce complete anæsthesia in an adult was one minute; longest time, ten minutes. Average, two and three quarters minutes; and in the last 22 cases, the average was two and a half minutes; the average quantity of ether used was one and four sixths ounces; vomiting before, 2 per cent.; vomiting after, 12 per cent.; vomiting in last 22 cases, 5 per cent.

I submit the following comparative table, the better to enable the reader to judge of methods by results:

METHOD PURSUED.	No. of cases.	Quantity of ether.	Time required.	Vomiting before anæsthesia.	Vomiting after anæsthesia.
		Average.	Average.	Per cent.	Per cent.
Open cone and sponge, free access of air (ordinary method)........	50	$3\frac{1}{4}$ ozs.	14 min.	No record.	60
Close cone, complete exclusion of air ("choke down").............	50	$1\frac{7}{8}$ ozs.	$3\frac{1}{4}$ "	2	$14\frac{3}{8}$
Dr. Adams's inhaler....	5	3 ozs.	15 "	20	80*
My new method, open cone................	105	$1\frac{4}{6}$ ozs.	$2\frac{3}{4}$ "	2	12

It is a question if this record could be much improved if all the patients had prepared themselves by refraining from the last preceding meal or had taken whisky or brandy, etc. The record as it stands is not even approximated in the literature of the profession; in proof of this I refer to the report of Sergeant-Major J. H. Porter. Professor of Military Surgery, Netley Hospital, London, Eng., who may be taken to represent expert England. He gives 26 cases, with an average time of eight minutes and ten seconds; average quantity of ether used, five and one eighth ounces; vomiting in almost fifty per cent. of his cases. Professor Stephen Smith, in his "Manual of Operative Surgery," with his usual brevity and conciseness, gives directions for the administration of ether. Among other things he says that anæsthesia can generally be induced in from four to eight minutes; that when it takes longer than the latter time there is some mismanagement in the ether—a statement from which I most respectfully dissent, for there are cases on record where the best and most experienced administrators in hospitals, after persevering for half an hour, were obliged to substitute chloroform. Taking his figures as correct, it would make an average of six minutes, and this is presuming that the patient abstained from the last meal, took one to two ounces of whisky or brandy fifteen minutes before, and smelled of a bottle or can containing the ether for ten minutes before the inhalation was begun. Much more to this purport could be adduced, but the two cases given represent the best results in England and America. The only contra-indications I recognize are, first, marked and palpable dilatation and fatty degeneration of the heart; I should want decided irregularity or alteration in its rhythm. I am quite sure that I gave it, at least in one instance, where there was mitral regurgitation without any unpleasant effects, and have given it to many patients whose family physicians had advised them not to take it. I am disposed to think the danger more imaginary than real, especially where the anæsthetic condition is maintained only for a few moments. I do not find a case of death on record where the ether was administered quickly and only one and a half to two ounces used; moreover, I can not avoid the conclusion that, were all the cases of death from ether examined by autopsy, the findings would tally with the recent one in Pittsfield, Mass.—viz., that the ether had nothing to do with the death, which was caused by rupture of an aneurysm. In this belief I am fully borne out by the report of the Boston Society for Medical Observation, which reads: "There is no case of death known to your committee attributed to ether which could not be explained on some other ground equally plausible, or in which, if it were possible to repeat the experiment, insensibility could not be produced and death avoided."[*]

4 CYPRESS STREET, SPRINGFIELD, MASS., *September 21, 1886.*

THE SPHENOMETER;

A NEW INSTRUMENT OF PRECISION IN BONE-SURGERY.[†]

By MILTON JOSIAH ROBERTS, M. D.,

PROFESSOR OF ORTHOPÆDIC SURGERY AND MECHANICAL THERAPEUTICS IN
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VISITING ORTHOPÆDIC SURGEON TO THE CITY HOSPITALS
ON RANDALL'S ISLAND, ETC.

THE complexity of the quantitative questions which the surgeon interested in the study and correction of bodily deformities is forced to practically consider is so great that any attempt to reduce observed quantities to definite terms by means of instruments of precision should meet with hearty support. I say by means of instruments of precision, for it is impossible to accurately estimate by our unaided senses such quantitites as lengths, diameters, angles, curvatures, weight, and strength, all of which the orthopædic surgeon is constantly compelled to consider.

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[*] This table would seem to make all patients on whom the inhaler was used vomit before or after; but it happened that all but one vomited after, and one before as well as after.

[*] "Report of Boston Society for Medical Observation," p. 36.

[†] Remarks addressed to the Surgical Class, New York Post-graduate Medical School and Hospital, November 21, 1885.

This morning I received a new instrument of precision made for me by Mr. F. Kroedel, of this city. I have brought it with me to-day, thinking you would be interested in knowing about it. Given a bone of known diameter and degree of aberration, this instrument will accurately measure the base of the wedge necessary to be removed in order to correct the deformity.

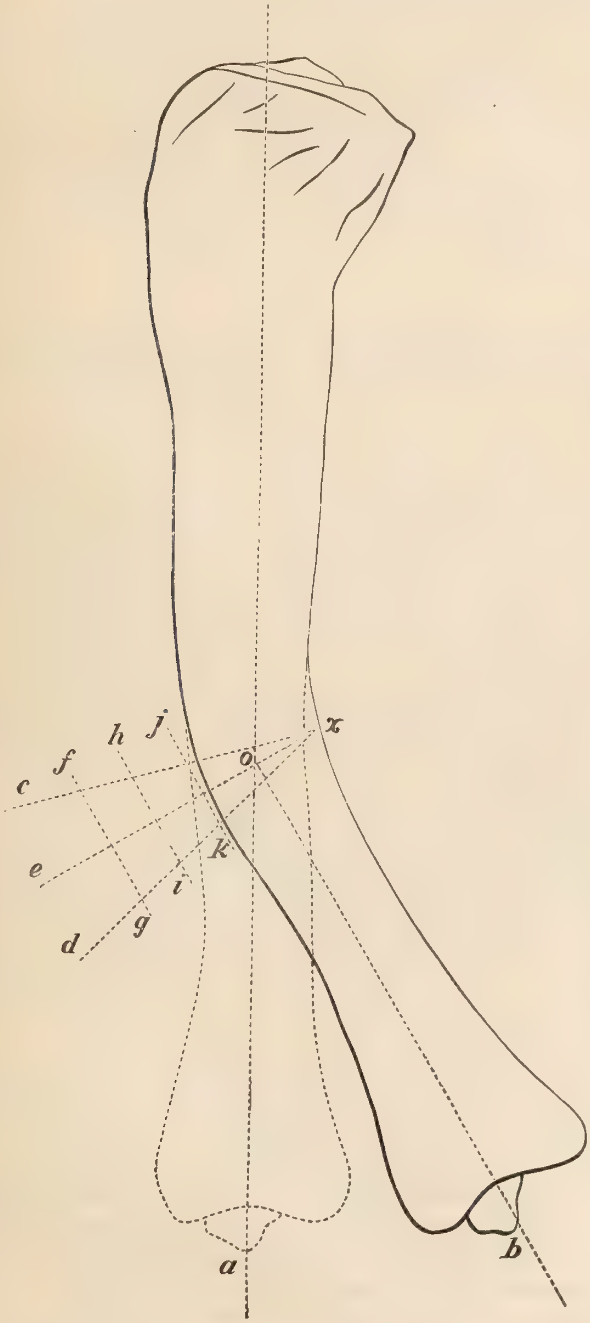

Fig. 1.

Sphenómeter (σφήν, a wedge; μέτρον, a measure), meaning wedge measurer, is therefore the name which the instrument will bear.

To illustrate the practical application of this instrument to bone-surgery, let us suppose that we have an anterior curvature of the tibia which we wish to correct, such as is diagrammatically represented in Fig. 1. The first step to be taken is to determine, by means of a protractor, the articular goniometer, or the epipedometer,* the exact extent in degrees of the aberration. This, we will say, we find to be an angle of 30°, represented in Fig. 1 by the lines *a*, *o*, *b*. Cutting down upon the bone at the site of its greatest deformity, we determine its diameter in the plane of the dotted line, *e*, *x*, by means of a pair of calipers. This, we will say, we find to be 16 mm. We are now in possession of the two definite quantities necessary to be known in order to make use of the sphenometer to measure the base of the wedge necessary to be removed to correct the deformity. These definite quantities are the degree of deformity and the diameter of the bone at the site of operation.

Taking the sphenometer, Fig. 2, we first set the lateral arms of the instrument, all four of which are of the same length, so as to inclose the angle of aberration. This is done by placing the inner edge of the lateral shaft over which the curved graduated arc passes so that it coincides with the line indicating the desired number of degrees on the arc. (Fig. 2 represents the sphenometer set at 45°.) The angle *a*, *o*, *b*, Fig. 1, is the angle of aberration in our hypothetical example. The sides of the wedge-shaped piece of bone to be removed to correct this angle must therefore be inclined to each other, so as to inclose an angle of equal extent to that of the deformity to be corrected—viz., 30°. (See Fig. 1, *c*, *x*, *d*.) The two angles, *a*, *o*, *b* and *c*, *x*, *d*, are therefore equal. The angle of aberration having been determined, it will be found that the dimension of the base of the wedge to be removed to correct it depends entirely upon the diameter of the bone at the site of operation. This is clearly shown by the difference in the length of the dotted lines, *j k*, *h i*, *f g*, inclosed by the lines *c*, *e*, *d*, placed successively at greater distances from *x*.

Upon the central arm of the sphenometer, which is graduated in millimetres, there slides at right angles to it a bar also graduated in millimetres. Now for the measurement of the dimension of the wedge to be removed for the correction of the deformity in question. It will be remembered that the sphenometer is set with its lateral arms inclined to each other at an angle of 30°, which is the extent of deformity to be corrected. The graduated bar at right angles to the central shaft is moved along until the diameter of the bone at the site of operation has been measured off. (In Fig. 2, 27 mm. have been measured off on the central arm of the sphenometer.) We can now read off from the graduated bar, which passes over the lateral limbs of the instrument, the dimension in millimetres of the base of the wedge necessary to be removed in order to correct the deformity. (In Fig. 2 the base of the wedge indicated by the sphenometer is 20 mm., 10 mm. on each side of the central arm.) With a deformity of 30° and a bone of 16 mm. in diameter, we find by the use of the sphenometer that the base of the wedge to be removed measures 8 mm. Eight mm. are therefore marked off on the convex surface of the bone. Selecting an imaginary point on the opposite side of the bone midway between the millimetre markings on the convex side, the bone is cut directly through in the direction of the line *c x*, Fig. 1. The second section is begun 8 mm. away from the first on the convex side of the bone, but the direction of the cut is such as to reach the opposite side of the bone at the same point as in the first section, as indicated by the dotted line *d x*. This wedge having been removed, and the distal end of the limb so placed as to coaptate the two cut surfaces of bone, it will be found that the deformity has been completely and perfectly reduced, as shown by the dotted lines indicating the contour of the bone, Fig. 1.

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* *Vide* a paper by the author entitled "Anatomical Geometry and Toponomy; an Introduction to the Scientific Study of Deformities, with a Description of New Mathematical Instruments." Read before the Medical Society of the State of New York, February 3, 1885. "Medical Record," February 21, 1885.

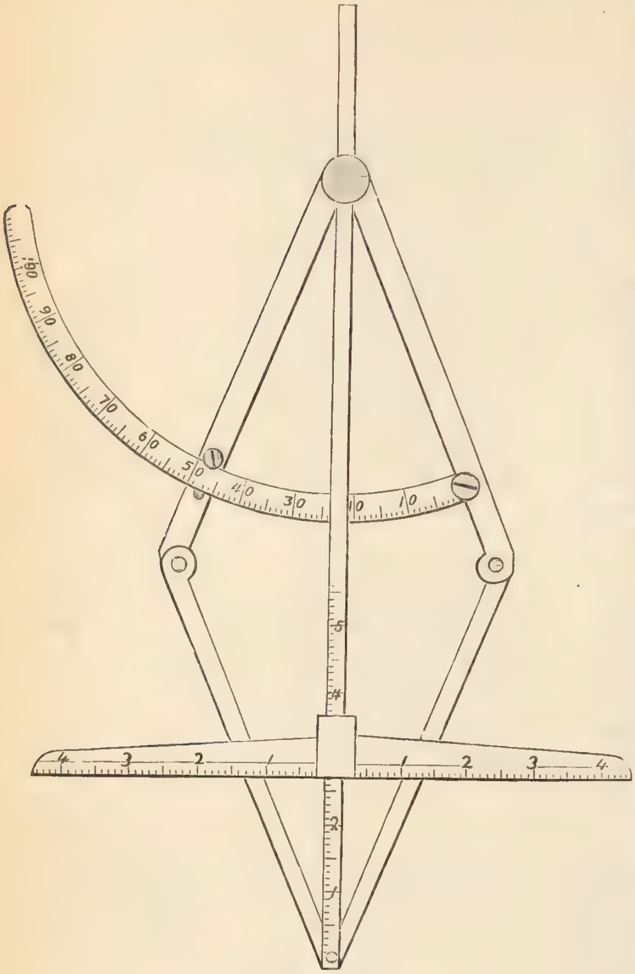

Fig. 2.

The operation of dividing the bone as herein described can not be performed upon the living subject with any of the instruments commonly used by surgeons, on account of their cutting the soft parts which surround the bone. By the use of the electro-osteotome* carrying a circular saw of appropriate size, and the peculiar form of protective retractor which I have devised, the operation is rapidly and easily performed, and is one of the safest and most satisfactory in the whole range of bone surgery.

It will thus be seen that we not only have the means now placed at our disposal of accurately measuring the extent of bodily deformities, but by the use of this instrument many of them may be reduced by operative procedures with mathematical precision.

In carrying out the simile which was used at the close of my paper, already alluded to in a foot-note as read before the Medical Society of the State of New York, I would say that, with the sphenometer and the requisite skill in its use, the orthopædic surgeon will find himself in a position to state the dimension of the wedge to be removed to correct a given deformity with as much accuracy as the oculist is to state the curvature of the lens necessary to correct a given error of refraction after examination of the eyes with his ophthalmoscope and set of trial glasses.

105 Madison Avenue.

A MODIFIED OPERATION IN LARYNGEAL STENOSIS FROM PARALYSIS.

By G. B. HOPE, M. D.,

ATTENDING PHYSICIAN, METROPOLITAN THROAT HOSPITAL.

It is natural that one should feel impressed by the unvarying unanimity of opinion with regard to the method of operative treatment in paralysis of one or both abductor muscles of the larynx, resulting from lesions of a permanent nature, and characterized by a marked impairment of the respiratory function. Of necessity such a condition demands a course of action vigorous and decisive to avert impending death from suffocation; and procrastination is merely to rest in standing dread of a possible spasm as sudden in its advent as fatal in its issue.

Tracheotomy, while ordinarily a simple operation and unattended by any present complications, yet, with the accompaniment of the permanent respiration of an atmosphere imperfectly fitted for the trachea and lungs, the annoyance of a tube, irritating and liable to displacement or obstruction, leaves, it seems to me, an opportunity for a modified line of treatment carrying out the radical removal of the obstruction without materially increasing the dangers or difficulties of the usual operation.

I would suggest, then—for, since the plan has recommended itself, it has not been my fortune to meet with a suitable case in which the application could be put practically to the test—a thyreotomy exposing widely the larynx, and a careful ablation of so much of the paralyzed cord, together with any other overhanging tissue, as seriously obstructs the lumen of the glottis. In other words, the treatment is that indicated in any form of neoplastic laryngeal obstruction that can not be removed by the open method.

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* See "Description and Practical Demonstration of the Working of Roberts's Improved Electro-osteotome, New Electrical Illuminating Apparatus, and New Form of Portable Storage Battery." Communicated to the New York Academy of Medicine, February 19, 1885. "New York Medical Monthly," October, 1886.

In this manner a permanent relief would be secured, which, even at the expense of a more or less loss of the voice function, would not only contribute more largely to the general comfort, but also to the best physical condition of the patient.

It is hardly necessary to add that a temporary use of the tracheotomy tube must bridge over the period covered by the immediate effects of the operation.

October 22d.

Correspondence.

LETTER FROM PARIS.

The French Congress of Surgery.—M. Tillaux on the Union of Severed Nerves by Suture.—M. Tédenat on the Treatment of Hydrocele.—M. Vulliet on the Treatment of Uterine Cancer.—The Italian Fasters.

PARIS, *November 1, 1886.*

THE second session of the newly formed Congrès français de chirurgie was held here from the 18th to the 24th of October, under the presidency of Professor Ollier, of Lyons. The meetings took place in the grand amphitheatre of the Paris Faculty of Medicine, which was fitted up with considerable taste for the occasion. The attendance was very large, all the most prominent French-speaking surgeons being present, not only from France itself, but also from Belgium, Switzerland, and Holland. Professor Ollier, in opening the congress, said that the international meetings gave most excellent results, notwithstanding the great difficulties that arose from the diversity of languages, and that therefore we could hope that a congress of surgeons understanding one single language must do good and effective work. As to the success of the present organization, it was already assured by the very large number of adhesions that had been received. M. Ollier was disposed to think that specialties must go on and increase, and he was inclined to favor this, as only by a division of work was it possible to arrive at great success in scientific medical study. The number of papers read and presented was so large that it would take up much space to merely enumerate them, so I must content myself with giving a short *résumé* of some of the more important of them. One of the most remarkable was by Dr. Tillaux, surgeon to the Hôtel Dieu, Paris, "On the Treatment of Divided Nerves by Suture." Having seen one of the patients that he operated upon lately, I can speak from personal knowledge of the subject. The case was that of a woman who had fallen and cut the median and ulnar nerves in the palm of her right hand and had lost all sensation in her fingers until Dr. Tillaux sutured the nerves, when she quite recovered normal sensation. The fact that most physiologists deny the possibility of success in these operations gives this matter a certain amount of importance. Dr. Tillaux said: "When a nerve has been severed in an accident, two cases will present themselves to the surgeon: one is that he is consulted soon after the accident, when he can attempt to secure primary reunion, or else it will be a wound that has already been healed, for a longer or shorter time, but sensation is lost, so that the operation must be secondary. After the complete section of a nerve, as, for instance, the median, the cut ends draw apart more or less, and the superior cut end swells up in the form of a bulb, while the inferior end is drawn out to a point, and there will be thrown out a grayish projection of new nerve substance that will unite the two cut ends and re-establish their functions. I am a perfectly convinced partisan of these modes of union of divided nerves, and I believe that primary reunion will succeed in re-establishing their normal functions. The physiologists deny this, but I can answer by affirming the clinical facts *in man*, which any one here can see by examination of a patient now in my wards. The patient presented herself to me with the median and ulnar nerves cut, and in all the parts supplied by these nerves there was a loss of sensibility to touch, to pain, and to temperature. I sutured the nerves and the next day the entire sensibility had returned. The physiologists will say that it was owing to the *recurrent* nerve-fibers, but, as in this case both the ulnar and median were severed, there could not be any recurrent fibers. I must hold, then, that their reasoning is wrong; and, when we remember that they operate *on animals* and can not obtain what is an essential in these operations, *immobility*, we can largely explain their error. I may also state that it is possible to succeed in cases that have had this disability existing for some time. [He here gave an account of the case of a woman who had cut her hand several years before, and had lost all sensation in her fingers, in which he had operated with success.] So I am in favor of secondary operations also. There are certain precautions to take that are of importance to insure success. The first is to secure immobility; next, the two surfaces which are freshened must not be pulled too close together, nor must the nerve-tubules be annoyed by scratching them in cleaning the parts, and the neurilemma must not be crumpled."

Dr. Tédenat, of Montpellier, spoke of the treatment of hydrocele, having lately had some one hundred and fifty cases to treat. He said that there was a marked tendency to substitute the aseptic-incision treatment for the old-fashioned injection of iodine, but, after a large and varied experience, he could recommend the injection system with *very small quantities* of *pure* tincture of iodine, which he would leave in the vaginal tunic—this in all simple cases; but if the last-named tunic was inflamed and there were any complications, he would recommend the aseptic incision.

M. Vulliet, of Geneva, gave some account of his method of treating cancer of the womb by very decided dilatation of the os uteri, so that the interior of the whole organ could be seen. This idea he had mentioned last year, and he had found that it was possible to thus enormously dilate the uterus without doing any harm, and with the effect of being able to treat cancer and other uterine complaints with great benefit. It had the advantage of enabling him to find cancers when they were just commencing, when they could be pulled off the walls with the finger-nails or a curette, after which a forceps might be put on and a portion of the adjoining tissue dissected off, or the surface be touched with chloride of zinc, while dressings of iodoform could be placed with more advantage than by the haphazard method now in use. The dilatation also had the advantage of securing the outflow of all liquids.

We are threatened with two new fasting heroes of the Tanner type. One is Succi, who underwent a thirty-day fast lately in Milan, and has just arrived here to repeat his feat; but another of his compatriots, Stefano Merlatti (it is stated by our local papers), has already begun a *fifty days' fast* by first eating a whole goose, bones and all, with a dessert of two dozen walnuts eaten with their shells. I am inclined to think that this last gentleman is not very serious, as the stories told of him sound too much like those of circus performances; but, if Signor Succi attempts another fast here, as stated, and it is conducted under competent scientific supervision, I will send a full and personal report of it.

THE
NEW YORK MEDICAL JOURNAL,
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Edited by Frank P. Foster, M. D.

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THE CONTRACTURE DIATHESIS.

In a recent issue of the "Progrès médical" attention is drawn to a condition to which Charcot gave the name of *diathèse de contracture*—a special nervous state possessing some of the features of both contracture and paralysis. Charcot tried to explain the pathology of the condition by a local ischæmia induced by a more or less complete obstruction of the blood-vessels supplying the part. In order to test his theory, he applied an Esmarch's bandage to the arms and legs of several colleagues and students, without, however, being able to evoke the phenomenon. But it was quite different when the same thing was done to the limbs of hysterical subjects; contractions of the muscles set in almost immediately on tightening the bandage. The bandage was applied at the wrist, the elbow, and the point of insertion of the deltoid muscle, always with the same result, contraction extending from the distal end of the limb to the point of constriction. Both upper and lower extremities acted in the same way. On the removal of the compression, the contractions nearly always ceased.

Berez, who has studied seventy cases (forty-three in females and twenty-seven in males) in reference to this phenomenon in hysteria, observed it in as many as fifty-two cases. In two instances the contractions extended to the whole body, and in one case they affected the right side after the bandage was removed. Of the fifty-two subjects, nineteen were men and thirty-three were women. The same observer states that massage or percussion of the muscles prior to the application of the bandage will evoke contractions when constriction alone will fail. In most of his cases the existence of the condition was evident only on examination; but a few of the patients said that, on giving a sharp blow, the hand remained closed in a "state of fixation." The contractions may be called forth, independently of constriction, by massage of the muscles, percussion of the tendons, rough handling of the limb, faradization of the muscles or nerves, or simply rubbing the skin.

These observations seem to clash with those of Trousseau, Kussmaul, and our recent distinguished English visitor, Dr. Julius Althaus. In his paper on "Tetany," read before the Medical Society of the County of New York, Dr. Althaus stated that the effect of compression was an important feature in the differential diagnosis of hysteria and tetany, and tended to show that they were two widely different conditions. In doubtful cases of hysterical contracture, he says, compression of the limbs has enabled him to decide the question, for it appeared that, while in tetany pressure increased the rigidity still further, in hysterical contracture, on the contrary, the rigidity was lessened and ceased after the bandage had been applied for some time, to return, however, almost immediately when the pressure was withdrawn. This rather striking contradiction in the observations of renowned clinicians forcibly illustrates how much we are still in the dark in reference to the class of diseases known as the neuroses. We hope that before long we shall hear something on the point from observers on this side of the Atlantic. The study of the condition may, as Althaus says, throw light on the intimate nature of the vaso-motor disturbance present in hysteria and tetany.

THE TWO HUNDRED AND FIFTIETH ANNIVERSARY OF HARVARD UNIVERSITY.

Elsewhere in this issue we copy from the "Boston Medical and Surgical Journal" an expression of regret at the comparatively unimportant part taken by the Harvard Medical School in the late celebration of the two hundred and fiftieth anniversary of the founding of the university. Our contemporary's complaint is coupled with the very sensible suggestion that there ought to be an organization of the alumni of the medical school. We have on several occasions expressed our sense of the usefulness of medical college alumni associations. In so doing we have simply given voice to a feeling very generally entertained among the profession. Most of the prominent medical schools of the country already have such organizations. Many of them have had a career of long duration, and have been able in more ways than one to add to the efficiency and the resources of the respective institutions, while they have played a part in respect to professional *esprit de corps* that could not have been played to quite the same purpose, so far as we are able to see, in any other way. All this must long have been as apparent to Harvard men as to others, and it is strange that no such association has thus far been formed in connection with that institution. It may be that the class of men who take their medical diplomas from Harvard are, considered as a whole, less migratory than the graduates of the other great schools; that to a very great extent they belong in Massachusetts, and remain in that State after graduation, to become members of the Massachusetts Medical Society, which, as it holds its annual meetings in Boston under the shadow of the university, may in great measure serve the social purposes of a Harvard medical alumni association. This state of things may have retarded the general recognition by the graduates of the advantages likely to accrue to them and to their alma mater by the formation of an alumni association; but it was to be foreseen that their realization of the fact could not be indefinitely postponed, and it is to be hoped that it will now be precipitated by the sorry show made by the school in the university celebration.

It is consolatory to reflect that, notwithstanding the inconsiderable character of the part taken by the medical school on that occasion, the medical profession was prominent. Among the most conspicuous and attractive features of the exercises was the poem read by Dr. Holmes, and men of weight in the profession were among the most distinguished of the invited participants. On the whole, then, medicine has no reason to feel ashamed of its showing on this notable occasion in the history of the oldest institution of learning in the country.

MINOR PARAGRAPHS.

MURDER AS A MEDICINAL AGENT.

A NEWSPAPER item from Illinois, recounting the death of a child from supposed hydrophobia, states that "some months ago a boy in the same neighborhood had hydrophobia, and he was mercifully smothered with a pillow. Preparations were made to give Daisy the same relief, but the spasms suddenly ceased." A similar instance of therapeutic homicide was reported last summer from the northern part of this State, and there is some reason to fear that in many rural regions a barbarous practice, not uncommon in past generations, finds surviving advocacy, not only among the rustic populace, but even with some practitioners of medicine. To say nothing of the difficulties of diagnosis which might lead to the occasional smothering of simply hysterical patients, it may not be amiss to intimate that the law draws an arbitrary line beyond which the killing of patients becomes willful murder, and even the tacit assent of a physician, or his subsequent condonation of the intentional taking of life, would render him an accessory. Despite the emotional argument which holds it as a doctor's highest duty to painlessly put an end to his clients when his prognosis is hopeless, the fact that a person is certain to die of disease is not acceptable as a valid excuse for killing him or her by adventitious means.

QUASI-MEDICAL MENDICANCY.

THE growth of a shabby-genteel style of beggary in New York, as carried on by certain men and women who, on more or less flimsy pretexts, profess to have some special claim on the benevolence of medical men, can not have escaped general notice. That it has escaped general condemnation and anything like a systematic determination to suppress it by the sure but somewhat troublesome process of making it unprofitable is doubtless due in great measure, as our correspondent, Dr. Morris, suggests, to the fact that as a rule those who are called upon by these persons do not really know how to test the truth of their statements, or have not the time to spare for the purpose. The praiseworthy character of the Charity Organization Society is, however, well known, and we think it only needed some such announcement as Dr. Morris has made to set practitioners on the road to the suppression of the nuisance in question through its instrumentality.

PROFESSIONAL SECRECY AND GOVERNMENT OFFICIALS.

THE latest attempt to coerce physicians into a violation of professional secrecy has been undertaken by an official of the Pension Bureau, who, assuming (whether correctly or not is not to the point) that employees were getting to absent themselves for insufficient reasons, recently returned a certificate of disability signed by Dr. A. Y. P. Garnett, of Washington, with a demand for explicit information—meaning, of course, a statement of the nature of the case. Dr. Garnett very properly declined to furnish this information, on the ground that it would involve a violation of his professional obligations, and it is exceedingly gratifying to learn that he is sustained in this position by Secretary Lamar.

THE TRANSACTIONS OF THE COPENHAGEN CONGRESS.

WE have received a copy of the "Compte-rendu" of the Eighth International Medical Congress, held in Copenhagen in 1884, in the form of four large octavo volumes. The editor and secretary-general, Dr. Lange, has performed his difficult task exceedingly well. Dealing, as he had to, with writings in three different languages, none of which was his own, he has achieved a degree of accuracy worthy of the utmost commendation, and, in view of the unforeseen work that devolved on him as the result of circumstances which he explains, it must be said that the delay in the appearance of the volumes is not to be wondered at. For the most part, the subject-matter is of great value, and highly creditable to its authors. Owing to its bulk and its varied nature, it will be impossible for us to attempt an analytical notice of it. We congratulate Dr. Lange on the successful completion of his task.

A CHARLATANS' INSTITUTE.

A REMARKABLE orthopædic institute has lately come to light in Paris, according to an account published in the "Union médicale." Two children that had been under treatment at the institution were afterward brought to one of the public clinics, where it was found that one of them had pseudo-hypertrophic paralysis, and that the other was the victim of atrophic infantile paralysis. Yet they had with them cards given them at the orthopædic institute which contained the record of some dashing achievements in diagnosis. One of the cards bore the inscriptions "Sacro-vertebral, last-lumbar, and pubic luxation. Proposed operation: Reduction and anæsthesia. Fees: Reduction, 2,000 francs; anæsthesia, 200 francs." The other card read: "Right coxo-femoral luxation; sacro-coxalgia. Proposed operation: Reduction; fee, 1,000 francs." The medical men connected with the concern were properly denounced to the mother of one of the children as "shameless charlatans," but there is reason to fear that that will be the end of the matter, so far as any attempt to break up their nefarious practice is concerned. At least, the writer of the account seems to have no anticipation of any other result.

ITEMS, ETC.

Infectious Diseases in New York.—We are indebted to the Sanitary Bureau of the Fourth Division of the Health Department for the following statement of cases and deaths reported during the two weeks ending November 16, 1886:

DISEASES.	Week ending Nov. 9.		Week ending Nov. 16.	
	Cases.	Deaths.	Cases.	Deaths.
Typhus	0	0	1	0
Typhoid fever	27	11	23	9
Scarlet fever	22	5	26	3
Cerebro-spinal meningitis	6	5	7	7
Measles	218	26	262	46
Diphtheria	106	37	124	49

The Harvard Celebration.—Commenting on the recent celebration of the two hundred and fiftieth anniversary of the founding of Harvard University, the "Boston Medical and Surgical Journal" says: "The occasion, apart from its many features and lessons of more general interest, offers one suggestion to the Medical Faculty and Medical School, and that is, the propriety of starting an Association of Medical Alumni. The Medical School is by far the oldest and largest department of the University except the Academic, and yet it had no distinctive celebration of its own existence, nor was it even represented in the students' procession of the closing evening, thus in both respects offering a strange contrast to its younger and weaker sister of the Law."

The Medical Department of the Army.—On Thursday last President Cleveland appointed Surgeon John Moore, Assistant

Medical Purveyor, to be Surgeon-General of the Army, to fill the vacancy caused by the retirement of Surgeon-General Murray.

Army Intelligence.—*Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from November 7, 1886, to November 13, 1886:*

Wright, J. P., Major and Surgeon. Ordered from the Department of Texas to the Department of the Missouri for duty as attending surgeon at Leavenworth Military Prison, Fort Leavenworth, Kansas. S. O. 257, A. G. O., November 4, 1886.

Forwood, William H., Major and Surgeon. Relieved from duty as attending surgeon at Headquarters of the Division of the Missouri and examiner of recruits at Chicago, Ill., and ordered to the Department of Dakota. S. O. 257, A. G. O., November 4, 1886.

Hubbard, V. B., Major and Surgeon. Transferred from the Department of Arizona to duty as attending surgeon at Headquarters of the Division of the Missouri and examiner of recruits at Chicago, Ill. S. O. 257, A. G. O., November 4, 1886.

Loring, L. Y., Captain and Assistant Surgeon. Sick leave of absence further extended three months on surgeon's certificate of disability. To be relieved from duty in the Department of California, and on the expiration of his present sick leave of absence he will report by letter to the Surgeon-General of the Army. S. O. 262, A. G. O., November 10, 1886.

Moseley, E. B., Captain and Assistant Surgeon. Assigned to duty as attending surgeon in San Francisco, Cal. S. O. 94, Division of the Pacific, November 1, 1886.

Perley, Harry O., Captain and Assistant Surgeon. Granted leave of absence for four months on surgeon's certificate of disability. S. O. 257, A. G. O., November 4, 1886.

Barrows, Charles C., First Lieutenant and Assistant Surgeon. Ordered to report to the commanding officer of St. Francis Barracks, St. Augustine, Fla., for duty at Fort Marion. S. O. 180, Division of the Atlantic, November 10, 1886.

Phillips, John L., First Lieutenant and Assistant Surgeon. Granted leave of absence for one month, with permission to apply at Headquarters of the Division of the Missouri for an extension of one month. S. O. 116, Department of Dakota, November 2, 1886.

Ewing, Charles B., First Lieutenant and Assistant Surgeon. Ordered from Fort Supply, Indian Territory, to Fort Leavenworth, Kan., for duty. S. O. 126, Department of the Missouri, November 6, 1886.

Ives, Francis J., First Lieutenant and Assistant Surgeon. Ordered to proceed to and take station at Fort D. A. Russell, Wyoming. S. O. 145, Department of the Platte, November 4, 1886.

Promotion.

O'Reilly, Robert M., Captain and Assistant Surgeon. To be Major and Surgeon, November 1, 1886, vice Clements, deceased.

Appointments.

Clendenin, Paul, First Lieutenant and Assistant Surgeon. November 5, 1886.

Anderson, Charles L. G., First Lieutenant and Assistant Surgeon. November 5, 1886.

Marine-Hospital Service.—*Official List of Changes of Stations and Duties of Medical Officers of the United States Marine-Hospital Service, for the week ended November 13, 1886:*

Ames, R. P. M., Passed Assistant Surgeon. To proceed to Vineyard Haven, Mass., as inspector. November 10, 1886.

Urquhart, F. M., Passed Assistant Surgeon. Granted leave of absence for seven days. November 8, 1886.

Wasdin, Eugene, Passed Assistant Surgeon. Granted leave of absence for seven days. November 11, 1886.

Magruder, G. M., Assistant Surgeon. Relieved from duty at Norfolk, Va.; assigned to duty at Marine Hospital, Chicago, Ill. November 10, 1886.

Society Meetings for the Coming Week:

Monday, *November 22d:* New York Surgical Society (in the afternoon); Medical Society of the County of New York; Boston Society for Medical Improvement; Lawrence, Mass., Medical Club (private); Cambridge, Mass., Society for Medical Improvement.

Tuesday, *November 23d:* New York Dermatological Society (private); New York Academy of Medicine (Section in Laryngology and Rhinology); Buffalo Obstetrical Society (private).

Wednesday, *November 24th:* New York Pathological Society; American Microscopical Society of the City of New York; Medical Society of the County of Albany, N. Y.; Philadelphia County Medical Society (conversational); Auburn, N. Y., City Medical Association; Berkshire, Mass., District Medical Society (Pittsfield).

Thursday, *November 25th:* New York Academy of Medicine (Section in Obstetrics and Diseases of Women and Children); New York Orthopædic Society; Brooklyn Pathological Society; Roxbury, Mass., Society for Medical Improvement (private); Cumberland, Me., County Medical Society (annual—Portland); Pathological Society of Philadelphia.

Friday, *November 26th:* Yorkville Medical Association (private); New York Society of German Physicians; New York Clinical Society (private); Philadelphia Clinical Society; Philadelphia Laryngological Society.

Saturday, *November 27th:* New York Medical and Surgical Society (private).

OBITUARY NOTES.

Bennett A. Clements, M. D., surgeon in the United States Army, died at Fort Leavenworth, Kansas, on Monday, the 1st instant. He was born in the District of Columbia and was appointed first lieutenant and assistant surgeon November 4, 1856. On November 4, 1861, he was promoted to the grade of captain, and on February 27, 1863, he was made surgeon with the rank of major. As a recognition of his services during the civil war, he was brevetted lieutenant-colonel March 13, 1865.

Nathaniel K. Kelley, M. D., of Plaistow, N. H., died on Friday, November 12th, at the age of eighty-six. He was born in Plaistow and was graduated from the Medical School of Maine in 1828. His entire professional life was spent in his native town, in which he was superintendent of schools for many years. In 1859 and 1860 he represented the town in the State Legislature.

Professor Paul Bert.—The death of this distinguished French physiologist and politician is announced as having taken place on Thursday of last week, in the fifty-fourth year of his age. During the late M. Gambetta's presidency, M. Bert was minister of public instruction. Perhaps the most important of his recent scientific work was that which related to precise methods of anæsthetization.

Letters to the Editor.

THE SUPPRESSION OF PROFESSIONAL MENDICANCY.

16 East Thirtieth Street, *November 8, 1886.*

To the Editor of the New York Medical Journal:

Sir: Some months ago you published an account of the case of a medical impostor exposed by the Charity Organization Society. The number of such cases that have come under the notice of the society has been considerable. Our records show that all sorts of stories have been fabricated, and that, no matter how improbable the tale, the efforts of these people to raise money from physicians seem to be a remunerative business. This success on their part may be due to the fact (!) that the New York doctor has so much money that he is glad to be relieved of it, or to his not having the time to look into the merits of the case, or possibly to his not knowing where to obtain the necessary information.

Having been connected with the society some time, and being thoroughly familiar with its workings, and knowing the organization of and the means adopted by professional mendicants, I am prompted to call the attention of the profession to the subject, and to tell them how they may protect themselves and do good to the community by getting rid of the beggars who present themselves. The society will willingly investigate each case submitted to it, and will report the result of its investigations to whoever may request it. Such reports are confidential, and there is no charge made. One of our objects is the suppression of professional mendicancy. To enable us to do this, we must have the co-operation of all. Mr. Charles D. Kellogg, organizing secretary, No. 21 University Place, will gladly give all information and investigate any case submitted to him. Yours truly,

Stuyvesant F. Morris, M. D.

A CONTRIBUTION TO LOCAL ANÆSTHESIA IN MINOR SURGERY.

581 Fifth Avenue, *November 16, 1886.*

To the Editor of the New York Medical Journal:

Sir: Appreciating the interesting article by Dr. Corning on Electro-anæsthesia, published in the issue of your Journal for November 6th, I determined to test the value of the suggestion in practical surgery. An opportunity was afforded on Saturday, the 13th, in a case of a tumor of the breast, of a mixed character—consisting of broken-down fat and pus—in a young lady of about twenty-three years of age—the result of a direct blow sustained about four months ago.

From her fear of the operation—she being predisposed to attacks of hysteria, and suffering somewhat from feeble heart-action—I determined to avail myself of the new suggestion in lieu of chloroform or ether. Dr. Corning attended with me, and induced cutaneous anæsthesia according to his painless method. An incision was made down through the sac, and to the lowermost portion of the tumor, resting on the pectoralis major muscle. The whole contents of the tumor—consisting, as I have said, of broken-down fat and pus—was then entirely emptied, and the edges of the wound were subsequently brought together by interrupted suture without causing her any pain during the period of the use of the knife or the insertion of the sutures. She experienced no pain whatever in the wound during the two following days, and from this circumstance I am inclined to think that the anæsthetic influence induced on skin surfaces during these operations has a more lasting effect than the period of the operation—in fact, lasting almost up to the period of union.

I submit this last clinical observation with a sincere hope that it may be sustained, ere long, by other clinical observers.

Morris H. Henry.

Proceedings of Societies.

NEW YORK STATE MEDICAL ASSOCIATION.

Third Annual Meeting, held in New York, Tuesday, Wednesday, and Thursday, November 16, 17, and 18, 1886.

The President, Dr. E. M. Moore, of Rochester, in the Chair.

A Form of Dislocation at the Elbow in Young Children.—The President took for the subject of his address the peculiar luxation at the elbow in young children, caused by the practice of lifting them by the arm. It had attracted little attention until lately, probably in consequence of the mildness of the symptoms and the relief obtained accidentally. The line of force acting in the production of the injury differed from that which caused other lesions at the elbow, such as those resulting from falls on the hand or elbow. Lifting the arm and suspending it at the same time caused replacement with a snap, and no further treatment was required. Neither serous effusion into the joint nor suppurative inflammation had occurred as sequelæ of the injury. The author quoted extensively from standard authorities on injuries of the joints, showing, he thought, that the views expressed as to the real nature of the luxation were erroneous. He then showed specimens illustrating his own views.

Recovery versus Cure was the title of a paper by Dr. Alfred Ludlow Carroll, of Richmond Co., who considered the popular abuse of medicines, whether received from quacks, from the manufacturers of special articles, from regular physicians, or from practitioners of various sects. The cause being removed, the natural tendency of the disease was to recovery, and we saw patients recover under all sorts of treatment; otherwise, the sects would die out. Physicians often failed to remember the motto, "Unless you feel sure you can do good, be contented to do nothing." Disease meant departure from hygienic laws, and the best service the physician could render was to discover those laws and place the patient in a position to observe them.

A Peculiar Foreign Body in the Stomach.—Dr. W. Finder, of Rensselaer Co., presented a specimen consisting of a mass of hair, about as large as two fists, from the stomach of a patient who had died twelve days after the author had been called to the case. The specimen would be presented to the museum of the College of Physicians and Surgeons.

The Nature and Treatment of Erysipelas.—Dr. Frederick Hyde, of Cortlandt Co., read a paper in which he took the ground that erysipelas was a general disease, due to some blood-poison, with a local manifestation, and that, therefore, the treatment should be constitutional, directed especially to keeping up the nutrition to the utmost, so as to enable the system to get rid of the poison. Certain local applications often employed sometimes resulted in a recession of the disease, giving rise to a much graver condition than existed before.

The Morphine and Cocaine Habit.—Dr. J. B. Andrews, of Erie Co., read a paper in which he stated that he had not seen a case of pure cocaine addiction, but that he had seen cases of the joint addiction to morphine and cocaine, for the most part among physicians. The effects of the combination, he thought, were much more disastrous than those of either morphine or alcohol alone.

Medicine and Pharmacy abroad was the title of a paper by Dr. E. R. Squibb, of Kings Co., based on observations in the chief cities of Europe. There there were far fewer physicians than in the United States, in proportion to the population, and their office was much more unostentatious; they commonly visited their patients on foot or in public vehicles. Yet their influence was greater. In America there was a class of physicians who were not excelled by any in Europe, but they were so obscured by the larger class of inferior men who kept themselves prominently before the public that the profession in this country appeared in general inferior to that in Europe. In Europe pharmacy was fairly on a level with medicine. This the author attributed chiefly to the control exercised by the governments.

Shot-wounds of the Intestines.—A discussion of this subject was opened with a paper by Dr. W. S. Tremaine, of Erie Co., in which he proposed the following questions: 1. What are the diagnostic signs of the involvement of the intestines in shot-wounds of the abdomen? (Discussed by Dr. Joseph D. Bryant, of New York Co.) 2. What should be the first measures of treatment in shot-wounds of the abdomen involving the intestines? (Discussed by Dr. E. M. Moore, Jr., of Monroe Co.) 3. Under what circumstances, and how soon after the injury, should laparotomy be resorted to in cases of shot-wounds of the intestines, and when is the operation contraindicated? (Discussed by Dr. W. T. Bull, of New York Co., Dr. Theodore R. Varick, of New Jersey, and Dr. Charles B. Nancrede, of Pennsylvania.) 4. What are the essential features of the technique of laparotomy, including the management of the wounded intestine? (Discussed by Dr. Frederic S. Dennis, of New York Co., and Dr. John B. Hamilton, of the District of Columbia.) 5. What are the best methods of after-treatment in cases of shot-wounds requiring laparotomy and suture of the intestines? (Discussed by Dr. Charles B. Nancrede, of Pennsylvania, and Dr. C. T. Parkes, of Chicago.)

Demonstrations at the Carnegie Laboratory were given in the evening by Dr. E. G. Janeway and Dr. Herrmann M. Biggs.

(To be concluded.)

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK.

Special Meeting, October 18, 1886.

The President, Dr. Daniel Lewis, in the Chair.

Tetany and Tetanilla.—Dr. Julius Althaus, of London, read a paper in which he said that tetany and tetanilla had probably existed for a long time, but had not until recently been recognized as distinct affections. Tetanus, arising from injury and exposure to cold, had been known to Hippocrates and Aretæus.

Commencing with tetany, the author said that it consisted of a succession of attacks of tonic spasm or rigidity of certain groups of muscles, mostly symmetrical, which followed one another at somewhat irregular intervals, the muscular contractions being followed by relaxation. The attack was not accompanied by loss of consciousness. There was undue mechanical and electrical excitability of the motor nerves and muscles. The chief causes which appeared to give rise to tetany were certain kinds of irritation acting on a feeble nervous system. Thus it was liable to occur after persistent diarrhœa, more especially in ill-fed and half-starved children. It might be excited by the irritation of worms in the bowels. Irritation in the sexual sphere of women and occurring in connection with menstruation, pregnancy, the puerperal state, and lactation, was an undoubted factor in its production. It might occur after typhoid fever, cholera, etc. Wet and cold were agents which influenced the development of the disease. Epidemics of tetany had been described, but some instances were referred to in which the symptoms described could be attributed to cerebro-spinal meningitis or hysteria. An explanation of several cases occurring together might sometimes be found in exposure to cold. Weiss had recorded four cases of tetany developing after extirpation of the enlarged thyroid gland by Professor Billroth. The age at which it most frequently developed was the period between one and five years, and again in that between fifteen and thirty years. Females were more liable to tetany than males.

A review of the determining influences led to the conclusion that they must be looked upon as exciting causes, and that a constitutional neurotic disposition must be present in order that the causes—cold, diarrhœa, etc.—might be effective in leading to the outbreak of the disease.

The symptoms of tetany might develop suddenly or gradually. In some cases, and according to his experience, especially in those in which the cause had developed suddenly, the disease might appear at once fully developed; but in those in which the nervous system was gradually undermined there was more likely to be progression in the severity of the symptoms. When premonitory symptoms were present they were found to be more particularly malaise, headache, dizziness, shooting pains in the limbs; slight rigidity of certain muscles might be combined with it, and a feeling of some impending illness. These symptoms became aggravated, and the violent symptoms of tetany set in. Then both hands would be seen to have assumed a peculiar position, not always the same, but varying according to the several groups of muscles which might be affected. In most instances it was the muscles supplied by the ulnar nerve which suffered, in some those under the control of the median nerve, while only seldom those supplied by the musculo-spiral. Therefore the common position of the hand was conical. There was always in true cases of tetany some degree of rigidity in the muscles supplied by the ulnar nerve.

In some cases the muscles of the lower extremities were affected; the toes might be flexed, the heel drawn up, or the toes might be widely separated, the knees extended, and the legs drawn up on the abdomen.

In some cases the limbs were affected alternately, but usually there was symmetrical affection on both sides of the body. In the large majority of cases only the muscles of the extremities were affected, but in some the head and body were involved, the head being pulled down, the spine curved, the muscles of the neck rigid and compressing the jugulars, the lips and tongue rigid, various forms of strabismus, contraction of the muscles of the pharynx and larynx, dyspnœa and cyanosis, and sometimes death from apnœa. Even the bladder might be affected. Dyspnœa so severe as to threaten the life of the patient sometimes suddenly ended in profuse perspiration and all the symptoms were relieved. The contraction of the muscles was sometimes very painful, more especially in children. In other cases there was a stiff and bruised feeling, rather than one of pain. The degree of contracture might vary from one minute to another, leading to spasmodic jerkings of the muscles; in some there was constant change, while in others the patient was quiet in bed, like a statue; in others the contracture was moderate, allowing of some movement. Forcibly overcoming the muscular rigidity caused pain. A sudden impression, as by cold or heat, would arrest the spasm momentarily, the attack might last five minutes or as many hours, or it might be repeated over and over again. Where the condition had lasted days together it was probable that there had been short intervals unnoticed by the attendants. If not so, then he would say that the case was not one of tetany.

Trousseau's symptom, the occurrence of rigidity after the application of a bandage around the leg, he thought could be produced both by pressure on the blood-vessels and on the nerves, but more quickly by pressure on the blood-vessels. This might be used as a diagnostic mark between tetany and hysteria, for in hysterical contracture the application of the Esmarch bandage was followed by relief. The faradaic, galvanic, and mechanical excitability of the affected nerves was much increased. The electrical tests might be of prognostic as well as diagnostic value; if normal, it might be concluded that the patient had recovered. The mechanical excitability was especially marked over the portio dura. The reflex excitability of the skin was not exalted. After an attack of tetany there was a feeling of lassitude and muscular weakness. The sensory symptoms were not conspicuous. Besides those referred to, there might be feelings of cold, heat, etc. Sometimes the patient felt as though walking on a carpet, when he was on the bare floor. Sometimes there were redness and œdematous swelling, more especially of the joints of the fingers or toes, arousing a suspicion of rheumatic fever. In severe cases the temperature might rise as high as 101° F., or higher. There might be flushing of the face, buzzing in the ear, loss of appetite, constipation, dryness of the skin or excessive perspiration, but in the majority of cases the secretions did not appear to have undergone any morbid change.

The duration of an individual attack varied from a few minutes to half an hour or more, and the number of attacks during the day was even more variable. A few cases of tetany had ended fatally. But observations up to the present time had not shown the precise pathological change. There were considerations which led him to think that tetany belonged to a large class of functional nervous affections still wanting the application of finer tests than we at present had to obtain a clear insight into their nature. But there had been some speculation as to the seat of the lesion. Some maintained that it was in the nerves, others in the cord; he could not accept Hughlings Jackson's views regarding its seat in the cerebellum: they seemed far fetched. The most rational explanation of tetany as seen clinically, the author thought, was a presumable undue excitability in the giant cells in the anterior horns of the spinal cord.

The diagnosis of tetany was not always easy except in typical cases. Reliance was placed chiefly on the paroxysmal occurrence of the spasm, its peculiarity in spreading from the periphery to the center, Trousseau's sign, and the electrical and mechanical excitability of the nerves and muscles. Tetany should not be confounded with epilepsy, cerebro-spinal meningitis, some forms of rheumatism, or ergotism.

Regarding tetanilla, Dr. Althaus had seen the complaint usually in neurotic subjects, frequently in those with a history of masturbation—usually in males. In this affection the spasms were clonic; there was absence of prolonged muscular rigidity and of Trousseau's symptom. The convulsions were symmetrical, ceased during sleep, and there was generally impaired motor power, or impaired co-ordination. The nutrition of the muscles was normal, but the excitability was increased; the knee jerk was more especially exaggerated. The degree of spasm varied, it being in some cases slight, in others severe; in some temporary, in others almost incessant. All the muscles of the body might be affected, either simultaneously or by turns. Walking, using the hands, and other voluntary movements were liable to increase the spasms, and the patient might be more or less disabled from following his occupation. But the greatest evil was the influence which the symptoms had on the patient's mind, as he was apt to fear having symptoms of epilepsy, cerebral tumor, progressive muscular atrophy, etc. The twitchings of progressive muscular atrophy differed from the spasms of tetanilla in that they affected more or less individual muscular fibers, and were not sufficiently powerful to cause movements of the limbs. The spasms of tetanilla were certainly not the forerunner of any more serious cerebral or spinal disease, for in one case which he had seen the spasms had first begun when the patient was sixteen years of age, and had occurred subsequently at various times up to the present, the patient now being fifty-four years of age, and healthy, although occasionally subject to attacks of this kind. All of his other patients had recovered. These spasms he believed also to be due to a similar, although a slighter, degree of irritation in the giant cells in the anterior gray matter of the cord, as in tetany.

The prognosis in tetany was generally not serious, although less favorable in children and persons cachectic and reduced in strength. Most patients recovered in two or three months, especially in favorable cases. In the treatment of tetany he recommended good hygiene, nourishing food; and, if caused apparently by wet and cold, the Turkish bath or wet pack and opium might be used; if worms were suspected, anthelmintics. As a direct sedative, hydrate of chloral was better than morphine. Iodide and bromide of potassium had proved useful in some cases. Electricity had been applied frequently without success to the affected nerves and muscles; but the application of a large anode to the spine with the cathode at a distance seemed to have a much better sedative effect. To cut short an attack of tetany threatening life, nothing equaled the subcutaneous injection of pilocarpine. As soon as profuse perspiration was established the spasm ceased, and the patient was rendered comfortable.

The treatment of tetanilla should be chiefly by mental impression. Assure the patient that nothing serious was the matter with him, especially that his brain was not affected.

Dr. W. A. HAMMOND said that it would be impossible for him to add anything to the very graphic description which Dr. Althaus had given of tetany. He believed that he had seen a good many cases of tetany, but he had recognized only four. The rest he had confounded with other diseases before he knew what tetany was. He was inclined to think that tetany was very common in the army during the civil war, and that it was mistaken for idiopathic tetanus. He had seen probably at least forty or fifty such cases, and in not one did death occur. The symptomatology given by the author of the paper had struck him as being very thorough. Dr. Hammond then spoke of the differential diagnosis between tetany and tetanus, and also made some remarks upon the probable morbid anatomy, saying that he could not conceive how the symptoms of tetany could result from disturbance of the giant cells in the anterior horns of the gray matter. He was more inclined to think that the disturbance lay in the antero-lateral columns, for it presented a strong analogy to a disease located in this region, namely, antero-lateral spinal sclerosis. He thought the posterior cells also participated in the disease, and therefore there was disturbance of sensibility. He was of the opinion that the disturbance of sensibility was one of the prominent features in the beginning of tetany, and he could not conceive how this could be due to disturbance in the cells in the anterior horns. Two of the cases which he had seen had recovered, probably without aid from the drugs administered; in the other two cases the disease was cut short by large doses of bromide of potassium (doses of a hundred grains).

As to tetanilla, he had never recognized a case, and he was disposed to regard it as hysterical, or something else. He should be disposed to criticise the name tetanilla, as it might be confounded with the term *tetanille*, employed by Trousseau.

Dr. E. DARWIN HUDSON thought that the description of tetany by Dr. Althaus and other writers did not embrace a sufficiently uniform class of symptoms to justify us in regarding it as a distinct disease. Other distinguished writers had given a greater variety of symptoms pertaining to tetany than had Dr. Althaus. It seemed to him that the muscular contractions occurring in rhachitic children, in nursing women, and at the menstrual period, were analogous in nature to the symptoms of tetany. Such symptoms had been seen by most of his medical friends, who regarded them as of a nervous nature—nervous explosions, as it were.

Dr. **Charles Heitzman** referred to the case of Weiss, spoken of by the author, and said that his conclusion from the microscopical examination was that there were not, as Weiss had claimed, evidences of inflammation, but of œdema or serous inundation in the structures examined, and this he thought was sufficient to cause disturbance in the motor sphere. The effect of pilocarpine in causing profuse perspiration and relieving the œdema would tend to support this view.

Dr. J. L. **Corning** said that in some experiments he had produced temporary insensibility in a marked degree in the lower extremities of a rabbit and dog by making injections of hydrochlorate of cocaine over the spinous processes of the vertebræ. Acting on this suggestion, he had made some injections of the drug over the vertebræ of a wet-nurse who had exaggerated reflex symptoms confined to the left forearm. The convulsive phenomena disappeared, and remained absent for about forty-eight hours following the injections, but, as they continued to return, and the patient objected to the repetition of the procedure, he finally gave her bromide of potassium with complete success.

Dr. J. C. **Peters** thought that many cases reported as tetanus were cases of tetany, especially in series of cases where recovery had been reported as almost always occurring. He had seen but three cases of tetanus, and all of the patients had died.

Dr. **Althaus**, in closing the discussion, said, regarding the very large doses of bromide of potassium (one hundred or more grains) which he had heard physicians in this country say that they had administered, that such doses would kill English children.

Book Notices.

The Laws and Mechanics of Circulation, with the Principle involved in Animal Movement. By W. H. Triplett, M. D. New York: J. H. Vail & Co., 1885. Pp. xxiii–510.

We regret to record an unfavorable opinion of a work which has evidently cost its author laborious excogitation and much industrious, albeit somewhat desultory and superficial, reading; but a patient perusal of the involved arguments, advanced in a syntactic form which has at least the merit of marked originality, has failed to convince us either that all present teachings of physiology are fundamentally wrong, or that the writer has mastered the elementary laws of physics. Quite to his own satisfaction, however, he proclaims that previous biologists, without exception, have been guilty of "wrong teaching most pernicious" for the lack of a "guiding principle" applicable to every phenomenon of life; and, in response to his introspective demand, "The key to be found at all? Of course it should," he proceeds to elaborate "a principle upon which to base the mechanics." His key, which is, so to speak, a double-barreled one, turns upon the postulates that the one great natural force controlling all molecular action, animate or inanimate, is "electricity and the interaction of the polar forces which electricity serves to intensify," and that in the animal world muscles actively expand to produce motion, instead of contracting for that purpose, as has been hitherto erroneously believed. In illustration of the former he explains that the "suspension" of the atmosphere in space "against the force of gravitation, which tends to pull it to the earth in a compact mass," and the greater rarefaction of its higher strata, are due to the formerly unobserved circumstance that the aerial molecules are "resting upon the polar forces, as the floor of support against the action of gravitation," and that the invisible portion of the solar beam rebounds from the earth as electrical force, and "scatters the atmospheric envelope . . . as a hammer does a piece of glass, the force radiating from the point of impact and driving the outermost fragments farthest apart." As regards the second proposition, he confidently affirms that the lungs, even to the terminal air-cells, have an active power of expansion, in which the diaphragm is in no wise concerned, for otherwise carbonic acid, "by reason of its weight, would accumulate in the alveoli," and dust, smoke, etc., gravitating "to the alveolar floors and mixing with the secretions, would soon form a thick layer of mud upon the capillaries, . . . producing asphyxia"; that the sphygmographic up-stroke is due to the innate and suctive expansion of the artery and not at all to the systole of the heart, which has little or nothing to do with the circulation, the deluded Harvey to the contrary notwithstanding; that the masseter muscle opens the mouth, and that the tibialis anticus pushes the metatarsus downward. Even the bladder, rectum, and uterus are denied any effective contractile autonomy, their evacuation being ascribed to the "piston" action of "the mass of intestines known as the mesentery," which is pushed upward or downward according to the demand for emesis or defecation. Incidentally, and to some extent irrelevantly, it is stated that "carbonic acid is the principal agent for producing nutrition in animals," nitrogen being chiefly useful for excretion from the capillaries into the intestinal canal to maintain "a balance of pressure" therein. Many other novel and extraordinary hypotheses are asserted, whereof a few are supposed to be substantiated by ill-devised and worse interpreted vivisections, which the Society for the Prevention of Cruelty to Animals might have inhibited without much detriment to scientific progress.

Insanity and its Treatment: Lectures on the Treatment, Medical and Legal, of Insane Patients. By G. Fielding Blandford, M. D., Oxon., etc. Third Edition. Together with Types of Insanity, an Illustrated Guide in the Physical Diagnosis of Mental Disease. By Allan McLane Hamilton, M. D., etc. New York: William Wood & Co., 1886. Pp. ix–379. [Wood's Library of Standard Medical Authors.]

The first edition of Dr. Blandford's work was issued over fifteen years ago, and was then well received by the profession in Great Britain and in this country. But fifteen years have made a great difference in our knowledge of insanity, and what would then have been regarded as a good book would fall far short of that standard now. Comparing the present edition with the first, we can not perceive that Dr. Blandford has made such additions and modifications as the actual state of psychological medicine requires. He appears to be in entire ignorance of the progress of the last ten years. For instance, we have been unable to find Meynert's or Kraft-Ebing's name anywhere in the book; they certainly do not occur in the index. He seems to have drawn his authorities almost entirely from British sources, especially from the "Journal of Mental Science," which, however valuable it may be, can scarcely be regarded as containing within its pages the embodiment of psychological medicine. As to the alienists of this country and the important contributions they have made to the physiology and pathology of mind, they are almost entirely ignored. The book is, however, well written, and Dr. Blandford expresses his opinions concisely and clearly. Dr. Hamilton's plates are striking and artistic, and are a useful addition.

A Reference Handbook of the Medical Sciences, embracing the Entire Range of Scientific and Practical Medicine and Allied Science. By Various Writers. Illustrated by Chromo-lithographs and fine Wood Engravings. Edited by Albert H. Buck, M. D., New York City. Vol. II. New York: William Wood & Co., 1886. Pp. 814.

Dr. Buck is to be congratulated on the promptness with which he has thus far been able to bring out the volumes of this great work. The second volume includes the articles from "Catarrh" to "Eye," inclusive. Those that seem to us the most prominent are: "Cells," by Dr. T. Mitchell Prudden; "Cerebral Cortex," by Dr. W. B. Scott; "Cerebro-spinal Meningitis," by Dr. James T. Whittaker; "Chancre," by Dr. Edward B. Bronson; "Cholecystectomy" and "Cholecystotomy," by Dr. J. McF. Gaston; "Cholera," by Dr. Harold C. Ernst; "Chorea," by Dr. Allan McLane Hamilton; "Cinchona," by Dr. W. P. Bolles; "Club-foot," by Dr. A. S. Roberts and Dr. Samuel Ketch; "Coca," by Dr. W. P. Bolles; "Color-blindness," by Dr. B. J. Jeffries; "Cranial Nerves," by Dr. Frank Baker; "Deaf-mutes," by Dr. E. A. Fay and Dr. E. M. Gallaudet; "Diarrhœa," by Dr. R. H. M. Dawbarn; "Digestion," by Dr. C. F. Withington; "Diphtheria," by Dr. H. C. Ernst; "Dislocations," by Dr. E. M. Moore; "Ear," by Dr. C. S. Minot, Dr Huntington Richards, Dr. A. H. Buck, Dr. D. B. St. J. Roosa, and Dr. J. O. Green; "Eczema," by Dr. Arthur Van Harlingen; "Electricity," by Dr. Roswell Park; "Epilepsy," by Dr. A. McL. Hamilton; "Examination of Recruits," by Dr. C. R. Greenleaf; "Extra-uterine Pregnancy," by Dr. W. H. Byford; and "Eye," by Dr. Benjamin Sharp, Dr. W. C. Ayres, Dr. W. S. Dennett, and Dr. Adolf Alt.

Anything like an analytical review of these articles would take us far beyond the limits of our space, and we will only say, in general terms, that Dr. Buck has displayed in the selection of his authors the same discreet carefulness that was noticeable in the first volume. We think the colored illustrations show an improvement as the work progresses, while the woodcuts maintain their excellence. In every way the volume is creditable both to the editor and to the publishers.

A Treatise on the Diseases of Infancy and Childhood. By J. Lewis Smith, M. D., Clinical Professor of Diseases of Children in Bellevue Hospital Medical College, etc. Sixth edition, thoroughly revised, with Forty Illustrations. Philadelphia: Lea Brothers & Co., 1886. Pp. xvi–870. [Price, cloth, $4.50; leather, $5.50.]

When a book reaches a sixth edition we may draw one of two inferences, either that it possesses inherent qualities which insure its success, or that the author has hit upon some happy vein which pleases the public taste. There is no doubt as to the basis upon which the popularity of the present volume rests. The many students who have profited by its teachings will bear witness to its worth. Whatever criticisms may have been urged against its pathology, there is little difference of opinion among the profession as to its practical value. It is essentially the outgrowth of the author's personal experience, and each new edition only represents his own increasing experience. The present edition presents a most pleasing appearance, and bears evidences of careful revision.

Hand-book for the Instruction of Attendants on the Insane. Boston: Cupples, Upham, & Co., 1886. Pp. 7 to 137. [Price, $1.25.]

This little volume is prepared by a sub-committee of the Medico-psychological Association, with a view to afford needed information to those about to devote their time and energies to the care of the insane. The topic is one of great practical importance, and the book will be read with interest not alone by attendants in asylums, but also by every young physician about to enter upon the practice of his profession. The language employed is devoid of technical ambiguity, while the style is simple and lucid.

It is a matter of surprise that heretofore so little attention has been given by hospitals and medical schools to the inculcation of correct methods of treating the insane. The stand recently taken by the "Hudson River State Hospital for the Insane," in organizing a school for instruction in the care of the mentally sick, is a step in the right direction.

Hospital Sisters and their Duties. By Eva C. E. Lückes, Matron to the London Hospital. Philadelphia: P. Blakiston, Son, & Co., 1886. Pp. 164. [Price, $1.]

This little book is designed to aid those in charge of hospital wards. It deals not with the details of nursing, but with the relations of head-nurses to their under-nurses and patients. Much common sense and knowledge of human nature are shown in the book. The great principle which it teaches is that firmness must be combined with consideration for others. It is well worthy of study for those to whom it is addressed, and for all who are interested in the matter of nursing.

GENERAL LITERARY NOTES.

Among recent foreign publications we note the following:

J. F. Bergmann, Wiesbaden.—W. Ebstein, "Die Fettleibigkeit (Korpulenz) und ihre Behandlung nach physiologischen Grundsätzen." 7th ed. (2*M.* 40.)

G. Fischer, Jena.—G. H. von Meyer, "Missbildungen des Beckens unter dem Einflusse abnormer Belastungsrichtung." (7*M.* 50.) —— R. Wiedersheim, "Lehrbuch der vergleichenden Anatomie der Wirbelthiere." 2d ed. (24*M.*)

W. Frick, Vienna.—H. T. Hillischer, "Ueber die allgemeine Verwendbarkeit der Lustgassauerstoffnarkose in der Chirurgie und den respiratorischen Gaswechsel bei Lustgas und Lustgassauerstoff." (1*M.*)

C. Gerold's Sohn, Vienna.—O. Drasch, "Zur Frage der Regeneration und der Aus- und Rückenbildung der Epithelzellen." (0*M.* 50.) —— L. Rosenberg, "Ueber Nervenendigungen in der Schleimhaut und im Epithel der Säugethierzunge." (1*M.*)

O. Parrisius, Berlin.—C. Zahn, "Unfug, Fehler und Gefahren bei dem Gebrauch der modernen Entfettungskuren." (1*M.*)

M. Perles, Vienna.—H. Heger, "Pharmaceutischer Almanach für 1887." (3*M.*)

J. Springer, Berlin.—H. Karsten, "Illustrirtes Repertorium der pharmaceutish-medicinischen Botanik und Pharmakognosie." (4*M.*) —— H. Peters, "Aus pharmaceutischer Vorzeit in Bild und Wort." (5*M.*)

A. Stuber, Würzburg.—M. Braun, "Ueber den Zwischenwirth d. breiten Bandwurmes." (1*M.*)

BOOKS AND PAMPHLETS RECEIVED.

The Physiological, Pathological, and Therapeutical Effects of Compressed Air. By Andrew H. Smith, M. D. Detroit: George S. Davis, 1886. [The Physicians' Leisure Library.]

On the Radical Cure of Inguinal Hernia. A Review of the Existing Status of the Operation, with Remarks on its Past History. By John B. Hamilton, M. D., Supervising Surgeon-General of the Marine Hospital Service, etc. [Reprinted from the "Journal of the American Medical Association."]

A Compend of the Diseases of the Eye; including Refraction and Surgical Operations. By L. Webster Fox, M. D., Ophthalmic Surgeon to the Germantown Hospital, etc., and George M. Gould, A. B. Philadelphia: P. Blakiston, Son, & Co., 1886. Pp. xi–9 to 148.

The Removal of Foreign Bodies from the Larynx: A Cockle-burr removed from the Larynx by Voltolini's Sponge Method. A paper read before the Academy of Medicine, June 28, 1886. By Max Thorner, M. D., Cincinnati. [Reprinted from the "Lancet and Clinic."]

An Address on State Medicine. By Alfred Ludlow Carroll, M. D. [Reprinted from the "Proceedings of the New York State Medical Association."]

Sanitary Institute of Great Britain. Congress at York. Inaugural Address. By Sir T. Spencer Wells, Bart., F. R. C. S. Delivered September 21, 1886.

A Case of Pregnancy complicated with Uterine Fibroids and Measles. By D. W. Cathell, M. D., Baltimore, Md. [Reprinted from the "Transactions of the Medical and Chirurgical Faculty of the State of Maryland."]

Reports on the Progress of Medicine.

MATERIA MEDICA, THERAPEUTICS, AND PHARMACOLOGY.

Subcutaneous Injections of Arsenic in Chorea Minor.—Dr. F. Frühwald ("Dtsch. med. Ztg.," 1886, No. 45) recommends equal parts of Fowler's solution and distilled water to be injected subcutaneously in cases of chorea minor. He begins with one drop, and each day increases the dose by one drop until it reaches eight or ten drops; he then diminishes it by a drop daily until a dose of one drop is again reached. To prevent the formation of abscesses, the injections must be made deeply. He has never observed any toxic symptoms, and a cure follows in three to four weeks, often in one or two weeks.

Pilocarpine in Rheumatic Tetanus.—A. Brünauer (*ibid.*, 1886, No. 61) succeeded in effecting a cure in a case of rheumatic tetanus—tonic and clonic contractions of the masseters, chest, and abdominal muscles—with pilocarpine after having in vain, for five days, tried morphine, chloral hydrate, zinc, iodine salts, salicylic acid, and quinine. He administered the pilocarpine hypodermically in doses of 0·02 grm. (one third of a grain) daily. After nine days of this treatment, the convulsions entirely ceased, and the patient could open his mouth. It can not, however, be said with certainty that the result was due to the pilocarpine, as the patient had also been given nightly doses of chloral hydrate during its administration.

Naphthalin as a Cause of Cataract.— M. Bouchard (*ibid.*, 1886, No. 60) made a communication, for M. Charrin, to the Paris Academy of Medicine, in connection with some experiments made on animals with naphthalin. The drug was administered to five animals, in two of which cataract appeared in from three to twenty days. The animals received a dose equal to one gramme for each kilogramme of their weight. In view of these results, persons may use naphthalin for medicinal purposes without the least anxiety, as the dose usually administered does not represent more than one sixteenth of the dose given in the experiments.

Iodism attended with Pemphigus and terminating in Death.—Dr. Franz Wolf ("Berl. klin. Woch.," 1886, No. 35) publishes a singular and interesting case of fatal iodism. The patient, a female, aged forty-eight, had been suffering from nephritis for three months. She improved, under suitable treatment, to a certain point, at which her condition remained stationary in spite of continued energetic treatment. As pilocarpine, which had been administered, was beginning to disagree with her and to lose its effect, a mixture of iodide of potassium was ordered four times daily, each dose containing gr. vijss. of the iodide. In three days afterward violent symptoms of iodism set in, attended with an extensive skin eruption having all the characters of pemphigus. None of the secretions or excretions gave any reaction of iodine, there was no diarrhœa, the temperature was normal, and the pulse was 96. The iodide was at once discontinued, means were employed to eliminate the drug from the system, and remedies employed to sustain the patient's powers. The patient, however, succumbed in five days, passing gradually into a state of collapse.

The author states that he knows only of one other case of fatal iodism attended with a bullous exanthem, and which was published by Morrow. He quotes the following from the latter observer: "It is a well-attested clinical fact that many of the severer forms of iodic eruption occur in patients who are found to be suffering from renal inadequacy and cardiac lesions." [A statement well worth bearing in mind, in view of the frequency with which iodide of potassium is given in kidney affections.] An autopsy in this case, unfortunately, was not permitted.

A Case of Cocaine Intoxication.—Dr. P. Mannheim (*ibid.*) reports at some length the notes of a case in which three subcutaneous injections of hydrochloride of cocaine produced violent symptoms of intoxication. The patient, a female, aged fifty-seven, rather anæmic, suffered from obstinate occipital neuralgia, for which 0·1 grm. (gr. jss.) of cocaine was injected subcutaneously into the back of the neck. This was followed by negative results. On the day following 0·2 grm. (gr. iij), in two portions, were injected into the neck and arm simultaneously. In three quarters of an hour afterward the patient suddenly noticed that she had lost the power of her limbs, she suffered from a feeling of great anxiety, the pulse was frequent, and the pupils were contracted. Two hours later her condition underwent a complete change; the pupils were dilated, and the pulse was 98, but regular and of good volume; there was violent pulsation of the carotids with severe palpitation of the heart. Associated with this condition of increased blood-pressure there was moderate vaso-motor spasm of the peripheral arteries, giving rise to a feeling of chilliness down the back and in the extremities. In addition, the patient complained of oppression of the chest and difficulty of breathing, a feeling of dryness in the throat, anorexia, and insomnia, so that she could obtain no sleep for the first thirty hours. The symptoms disappeared in forty-eight hours; but another attack occurred on the third day. These attacks recurred with varying frequency for the following six weeks.

[It seems to us there must be an error in the dose as stated above, and which corresponds to that given in the author's report. Eversbusch, who was among the first to recommend cocaine hypodermically for trigeminal neuralgia, states the dose at from 0·012 to 0·02 grm. (gr. ⅐–⅓); other authors gave it at 0·006 to 0·015.]

The Effects of Large Doses of Cocaine on the Nervous System.—Dr. Comanos Bey, of Cairo (*ibid.*, No. 38), reports the following interesting case: B. M., a sufferer from morphinism, was recommended 0·05 grm. (gr. ¾) of cocaine three or four times daily. For the first few days the substitution of cocaine for the morphine worked very well and was unattended with an untoward symptom. But at the same time the patient passed into another habit—cocainism—for on the occurrence of every slight pain and unpleasant feeling he resorted to hypodermic injections of cocaine. These in a short time caused anorexia, excessive irritability, noises in the ears, and from time to time shortness of breath and hallucinations of the senses of sight and hearing. He soon learned to allay these symptoms by hypodermics of morphine. To allay the pain of an attack of herpes zoster the patient increased the doses of cocaine so that for two or three days he used hypodermically as much as 1–1½ grm. (gr. xv–xxijss.) daily! Then occurred the following phenomena: Tremor, relaxation of the muscles, incontinence of urine, sudden peculiar changes in the fingers and toe-nails, anorexia, insomnia, great excitability, hallucinations of the senses of sight, hearing, and smell, strongly injected conjunctivæ, and a vacant stare. The patient fired several revolver-shots at the objects of his hallucinations. He was now taken to the German Hospital, where he recovered in two or three days under the administration of 0·05 grm. (gr. ¾) of morphine hypodermically three times daily.

Ferruginous Preparations Hypodermically.—Dr. G. Ludovic Hirschfeld ("Bull. gén. de thérap.," July 15, 30, 1886), at the suggestion of M. Dujardin-Beaumetz, made the subject of his thesis "Ferruginous Preparations administered Hypodermically." A number of experiments were made on animals and patients, the results of which are given in detail in the paper. We can give only the author's conclusions, which are as follows: (1) Subcutaneous injections of ferruginous preparations are painful; (2) these injections are inefficacious; (3) this form of medication is impracticable and difficult of application in practice; (4) there does not exist a preparation of iron which possesses all the desirable conditions for subcutaneous employment.

The Action of Thalline on the Animal Organism.—Dr. Tschistowitsch, quoted in the "Therapeutic Gazette," 1886, No. 8, publishes the results of a series of experiments made with thallin on frogs, rabbits, and dogs, as follows:

1. The sulphate of thalline, employed in doses of 0·02 to 0·1 pro kilo of the bodily weight (per os, per rectum, subcutaneously or intravenously), has in healthy animals a very uncertain action on the temperature. There is no direct proportion ascertainable between the quantity of the drug employed and the fall of temperature. 2. In febrile animals, however, the temperature falls proportionately to the quantity of the drug employed. The temperature rises again after the lapse of two to six hours. The drug causes no vomiting. 3. The blood-pressure in the febrile dogs is not materially altered by doses of thalline. 4. Intravenous injections of 0·02 grm. ($\frac{1}{3}$ grain) of thalline cause a fall of the blood-pressure and a reduction of the number of ventricular contractions. 5. The fall of the blood-pressure refers principally to the action of the drug on the peripheral vaso-motor apparatus, and partially only to its impression on the heart itself.

As to the anti-bacterial action of thalline, the author found that the alcoholic fermentation of grape-sugar was checked by the presence of 0·1 per cent. of thalline, and wholly prevented by 5 per cent. of the drug.

Hyoscine Hydrobromide as a Hypnotic.—Dr. F. L. and Dr. J. R. Haynes ("Therap. Gaz.," 1886, No. 9) have administered this drug to fifty-seven persons as a hypnotic. In some instances little or no effect was noticed, but generally one or more of the following symptoms occurred: 1. Muttering or rambling delirium. 2. Sleep, sometimes apparently natural, sometimes disturbed. 3. Intense reddening of the whole face, with sensations of heat affecting the entire body. 4. Muscular weakness, sometimes extreme. 5. Headache, sometimes affecting the entire cranium, sometimes frontal, and sometimes confined to the inter-parietal suture. 6. Dryness of the throat and mouth. 7. Dilatation of the pupil, with blurred vision. The remedy was given in doses ranging from $\frac{1}{80}$ to $\frac{1}{100}$ of a grain. The authors divide their cases roughly into three groups: (1) 15 cases in which hyoscine produced sleep; (2) 13 in which it produced delirium; (3) 29 in which it was without marked effect or was followed by various symptoms. As a result of their experience, they consider hyoscine an extremely unreliable hypnotic, and think it should not be used in practice, except in cases in which other hypnotics have failed.

Salicylate of Bismuth.—Dr. Solger ("Ctrlbl. f. d. ges. Therap.," August, 1886) contributes an important article on the new compound formed by the combination of salicylic acid with bismuth. It is a white, fine crystalline powder. The author had his attention drawn to this salt in 1882, when a colleague who had been suffering for ten years from constantly recurring pains in the region of the left flexure of the colon had been permanently relieved by a fortnight's administration of the remedy after a variety of means and drugs had failed. Since then he has used the preparation in a great number of cases, both in private and in hospital practice. He gives it in powder, with equal parts of sugar of milk, in doses of 0·8 grm. (gr. xij) three times daily. It produces no unpleasantnesses on either an empty or a full stomach. Dr. Solger succeeded in curing with this remedy long-standing cases of chronic diarrhœa which had resisted all other forms of treatment. It is interesting to note that a different class of cases were benefited by salicylate of bismuth. They consisted of gastric catarrh accompanied by obstinate constipation. Several cases of this kind are recorded. The author lays particular stress upon the fact that he has seen beneficial results only from the preparations procured from Gehe, of Dresden.

Unpleasant effects were noticed in cases of obstruction with diminished alimentation. Discomfort, a furred tongue, and indefinable pains in the stomach and bowels form the phenomena of beginning intoxication. A dose of castor-oil readily disperses these symptoms. Salicylate of bismuth is therefore contra-indicated in pyloric stenosis. Besides its astringency, the salt has an eminent disinfecting property on the contents of the alimentary canal, particularly on that of the lower part of the intestines, in which it resembles naphthalin. But naphthalin can be taken only for a short time, while the bismuth salt can be taken for months without discomfort or harm.

Calomel in Cardiac Diseases.—Professor S. Stiller (*ibid.*, Sept., 1886), influenced by the good results obtained by Jendrassik, has used calomel in fourteen cases of cardiac dropsy, some of which were in private and some in hospital patients. He did not observe the extraordinary diuretic effect that Jendrassik observed in some of his cases, but the good results of the drug were always so prompt and marked that calomel must acquire a sure footing in the treatment of cardiac troubles. A few cases are recorded which bear out the author's assertions. In one case of senile cardiac degeneration in a very advanced stage calomel had no effect; neither had the subsequent administration of digitalis. The same was true in a case of renal dropsy, and also one of dropsy from cirrhosis. In cases of cardiac dropsy with considerable albuminuria the action of the remedy is much slower, and is noticeable only after five or six days' administration. The author sums up as follows: 1. Calomel is a prompt diuretic and hydragogue in cardiac dropsy, being more rapid and powerful in its action than digitalis; with other remedies there is no comparison. 2. Its action is not limited to the cellular œdema, but extends also to the effusion into the cavities. 3. Diuresis sets in abruptly after three or four days' administration of the drug; it is advisable then to withhold the remedy until its effect is beginning to pass off. 4. Its *modus operandi* seems to be through its influence on resorption, and not upon any effect on the heart or kidneys. 5. In a majority of cases diarrhœa occurs, and sometimes stomatitis, which, however, are not manifestations of mercurialism. 6. Opium checks the diarrhœa without any apparent effect upon the diuresis. 7. In advanced stages of cardiac disease calomel seems to hasten the lethal termination. 8. Calomel is not a substitute for digitalis, as it is not a heart tonic, but, given either alternately or with digitalis, it forms a powerful auxiliary to that drug, and constitutes an invaluable acquisition in cardiac therapeutics.

Miscellany.

The New York Academy of Medicine.—At the next meeting of the Section in Obstetrics and Diseases of Women and Children, to be held next Wednesday evening, Dr. J. Lewis Smith will read a paper on "The Feeding of Infants deprived of Breast Milk," and Dr. Joseph E. Winters one on "Wet-nursing *versus* Artificial Feeding."

Colden's Liquid Beef Tonic.—Mr. T. Colden announces that, since Dr. Hassall's analysis of this preparation was published, he has, at the request of several eminent members of the medical profession, added to each wineglassful two grains of soluble citrate of iron, so that there are now two preparations, labeled respectively "with iron, No. 1," and "without iron, No. 2."

A Correction.—In our last issue, in a notice of M. Trouessart's "Microbes, Ferments, and Molds," we inadvertently made use of an expression implying that the *Phylloxera* belonged to the vegetable kingdom. Instead of "other like fungi," we should have said *other parasites.*

The Health of Chicago.—According to the Health Department's "Condensed Statement of Mortality," for October, the whole number of deaths was 1,043, including 1 from carbuncle, 28 from cholera infantum, 1 from cholera morbus, 151 from croup and diphtheria, 10 from diarrhœa, 6 from dysentery, 14 from entero-colitis, 6 from erysipelas, 2 from cerebro-spinal fever, 3 from remittent fever, 15 from scarlet fever, 66 from typhoid fever, 7 from typho-malarial fever, 8 from pyæmia and septicæmia, 2 from thrush, and 3 from whooping-whoop.

THERAPEUTICAL NOTES.

Solanine.—Dr. D. J. Leech contributes to the November number of the "Medical Chronicle" the following summary of an article by M. A.

Geneuil, published in the "Bulletin général de thérapeutique" for September 30th: "Dr. Geneuil gives a systematic account of the physiological action and therapeutic uses of solanine, an alkaloid which has been found in the leaves, berries, and twigs of the woody nightshade (*Solanum dulcamara*), in the berries of the garden nightshade (*S. nigrum*), in the potato, and in many other plants belonging to the *Solanaceæ*. The composition of the alkaloid is not exactly determined. It may be prepared from the young sprouts of the potato. The crystals which it forms, when carefully prepared, are insoluble in water, slightly soluble in ether, more so in alcohol; they cause a burning sensation in the mouth. By prolonged contact with acids solanine is decomposed into glucose and solanidine, but salts of the alkaloid can be formed with acids, and these salts are very soluble in water.

"According to Dr. Geneuil, solanine may influence the brain, and cause vertigo, heaviness in the head, singing in the ears, and even sleep; in toxic doses, violent cephalalgia and delirium. But the special influence of the drug, he says, is on the medulla, spinal cord, and nerves. It induces anæsthesia of the terminal extremities of the sensory nerves, and also paralyzes the motor nerves, but the explanation given of its influence on the motor system is, to say the least of it, confusing, for we are told that it causes paralysis of the medulla and cord—'et, comme conséquence, paralysie des extrémités terminales des nerfs moteurs.' The sequence is not quite clear. We are told, moreover, that in still larger doses the excito-motor power of the cord is exalted, and convulsions and tetanic spasms occur.

"Solanine causes anæsthesia of the terminal extremities of the pulmonary plexus, and thus diminishes the sensibility of the bronchial mucous membrane. It depresses the respiratory center in the medulla, and hence slows the breathing. The pulse is sometimes at first decreased in frequency; afterward the heart beats more frequently, owing to paresis of the vagus ends in the heart. On the digestive organs solanine acts as an irritant, producing loss of appetite and a tendency to nausea, or even vomiting, but eventually it paralyzes the terminal branches of the pneumogastric in the stomach. In small doses it has a laxative effect, produced, according to Dr. Geneuil, by an influence on the sympathetic similar to that of atropine; a desire to evacuate the bowels without the power of doing so is not infrequent after solanine. Large doses produce vomiting, colic, and constipation.

"It does not affect the urine, nor the skin secretions, unless in toxic doses. It does not produce anæsthesia when applied locally. Although the pupils of children poisoned by the garden nightshade have been found dilated, no effect on the pupil has been observed after solanine. Generally speaking (according to Dr. Geneuil), the physiological action of solanine resembles that of atropine, and he has found it of service in the relief of pain in many ailments. He administers ¾ to 4½ grains daily, divided into three doses, sometimes as much as 7½ grains in twenty-four hours. Sometimes he gives it subcutaneously, injecting a solution of ⅙ to ¾ grain of the chlorohydrate of solanine dissolved in water two to four times daily. It may be also absorbed by the skin if the epidermis be removed by a blister.

"Dr. Geneuil records several cases of long-standing sciatica cured by solanine given as above described. In one case the subcutaneous injection succeeded after the internal administration had failed. In neuralgias of various parts of the body the alkaloid proved very efficacious in relieving pain.

"A severe prurigo was cured in three days by taking in divided doses three grains of solanine the first day, nearly four grains the second, and four and a half the third; in two milder cases the itching was removed by smaller doses.

"In one case the drug relieved the pain consequent on cystitis, and it was given with advantage in rheumatic, gouty, and other painful ailments.

"Dr. Geneuil strongly recommends solanine for the relief of stomach pains, whether dyspeptic or cancerous. Small doses (¼ to ½ grain) should be given half an hour before eating, or the same amount of the hydrochlorate may be given subcutaneously. In asthma, cardiac asthma, and bronchitis he has found it give relief, and he suggests its use in whooping-cough, and wherever analgesics are needed to combat spasm or pain. In a few cases vertigo, singing in the ear, or diarrhœa followed the use of solanine, but, according to Dr. Geneuil, it is not a dangerous drug like morphine or atropine. Subcutaneous injections do not give rise to inflammation.

["Very diverse opinions have been expressed with regard to the action of solanine and the plants which contain it. Dr. Garrod found no result from the exhibition of sixty ounces of concentrated infusion of the dulcamara and half a pound of the fruit. It is known that this plant contains very little of the alkaloid; which is, perhaps, sometimes entirely absent. Some have found that solanine produces sleep, others have noted no soporific effect; dilatation of the pupil has been noticed, and albuminuria has been said to follow its use. Possibly, exactly the same alkaloid has not always been employed. If Dr. Geneuil's views are confirmed by subsequent observers, we have in solanine a valuable addition to therapeutic agents. It is at present an expensive drug. Merck charges 9*s.* a drachm for it."]

Snake Poison as a Preventive of Rabies.—Dr. Fernandez, of Barcelona ("Semaine méd.," No. 41, 1886; "Dtsch. Med.-Ztg.," Oct. 25, 1886), having observed that dogs which had been bitten by snakes, and afterward by rabid animals, never fell victims to rabies, has begun a series of experiments by inoculating dogs with viper poison in small quantities. The animals become feverish, dull, and more or less somnolent, but regain their usual health in four or five days. They are then inoculated with the saliva of a rabid dog, or caused to be bitten by one. The experiments are still in progress.

Cantharides as a Preventive of Rabies.—Dr. Karchevski ("Russkaya Meditsina"; "Brit. Med. Jour.") has recently tested cantharides as a preventive of rabies, at the suggestion of Professor Lashkevich. Three men who had been bitten by a rabid wolf were the subjects of the experiment, and one of them had been bitten very severely. Cantharides plasters were applied to all the wounds, and the drug was given internally, a grain of the powder daily, for a week, when the patients complained of a sense of heat in the urethra. Seven months have elapsed and the men are still well, but the author does not intimate that a definite conclusion is to be drawn from the fact.

Ice-water Enemata in the Treatment of Diarrhœa.—"This means of treatment," says Dr. R. M. Simon ("Brit. Med. Jour."), "has frequently been adopted in cases of collapse occurring during the diarrhœa of young children at the Birmingham General Hospital. In cases occurring outside hospital practice, I have found this method not generally known. Being convinced of its utility, I am tempted to record my experience. Ice should be dissolved in water, and from two to three ounces injected. The immediate effect is commonly a quiet sleep and improvement in the collapsed condition. Subsequently the effect upon the diarrhœa is also good, and it will rarely be found necessary to repeat the enema. Internal treatment may often have to be continued, but I have no doubt that the life of many a collapsed child has been saved in this way. No reference is to be found in Ringer's 'Therapeutics' to this method of treatment, but doubtless it is known to many of the older practitioners, though its disuse has led to its being unknown to the younger members of the profession. It appears probable that it acts by an astringent effect on the loaded vessels of the intestines, and so at the same time warming the exterior of the body, and diminishing the materials for the intestinal flux. It has sometimes been found expedient to give a few drops of brandy about the time of injection; but, in my experience, no depression or bad effect has ever resulted."

Biniodide of Mercury in Scarlet Fever.—In the same journal Dr. C. R. Illingworth, alluding to a former communication of his on biniodide of mercury in scarlet fever and diphtheria, says: "That it is a true specific for the former is proved by the defervescence commencing immediately upon the administration of the medicine, instead of upon the fifth day, and by the absence of desquamation in consequence. That it acts as a specific in the latter is shown by the rapid disappearance of the membranous effusion and reduction of temperature. The efficacy of the medicine depends, I think, upon the diffusible potassic iodide carrying the germicide biniodide to every portion of the circulation. Prescribed in this form, the biniodide of mercury has not, so far as I am aware, been used before for these diseases."

The Michelia Niligerica as an Antipyretic.—The "Lancet" states that the leaves of this Ceylon plant are asserted to have been found more decidedly febrifuge than cinchona. A peculiarly bitter principle is said to have been extracted from them.

Original Communications.

CLINICAL OBSERVATIONS ON ENDOSCOPY OF THE MALE URETHRA.*

By HERMANN G. KLOTZ, M. D.,
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While it is considered a triumph in every branch of medicine and surgery to bring the intricacies of disease and its pathological appearances nearer to the eye by mechanical means, it seems strange that the direct ocular examination of the interior of the male urethra by the endoscope has up to the present time met with so little favor from the profession. While it is nearly universally conceded that the methods commonly employed for the treatment of the chronic affections of the urethra still remain unreliable and unsatisfactory in a good many cases, yet the endoscope is resorted to by but few, as by far the greater part of the profession either ignore its existence obstinately, deny its efficacy, or even consider and denounce it as dangerous. Nearly every author on the subject has had reason to complain of this apathy or antipathy, and various reasons have been adduced for this experience. Perhaps the patrons of the endoscope themselves are partly to blame, because some, no doubt, were too enthusiastic about its value, and promised easy and quick success where, in reality, good results can be attained only by long and patient work. Others, again, were too hasty in presenting as a complete system what really consisted only of valuable fragments of pathological and therapeutical knowledge. It seems to me that the period has not yet passed wherein the single worker with the endoscope can best promote the acknowledgment of the diagnostic and therapeutical value of that instrument by plain and faithful reports of his experience, even though some of his observations, and the interpretations thereof, should prove erroneous. Errors often tend to bring out the truth, mistakes of one explorer may lead the other into the right direction, and good results, obtained in even a small number of cases, may encourage others to enter this field or arduous labor with still better success.

As soon as I found myself more frequently confronted in practice with cases of chronic gonorrhœa in which injections, internal medicines, and sounds had been tried sufficiently without any notable effect, I felt the desire to look into the urethra for the purpose of ascertaining the cause of the persistent discharge. At that time nearly all publications on the subject referred to the endoscope of Désormeaux, who, in 1855, had presented his instrument to the Académie de médecine, and in 1865 had published his book on the same. Although it can not be denied that excellent results had been obtained with Désormeaux's instrument, even its admirers conceded that it was rather cumbersome and too complicated for use in general practice. Couriard and Ebermann, in St. Petersburg, as early as 1865, had employed less complicated instruments—viz., the laryngeal mirror and separate tubes; but little attention had been paid to their observations. But when, during and after 1874, Gruenfeld and several other Vienna authors began to communicate their experience with still less complicated instruments and methods of examination, the possibility of exploring the interior of the urethra satisfactorily seemed to be within reach, and I at once set to work as soon as I could get the necessary instruments. After repeated fruitless efforts, I gradually began to be more and more successful, so that in 1880 I was able to detect a group of polypous growths in the membranous urethra, and to remove the same by means of an instrument which was described in a paper published in the New York "Medical Record" in August, 1881. Unfortunately, I have kept but scanty notes of my early cases; but since 1882 I have kept a record of nearly all of my patients. From these notes I have taken (without selecting) one hundred cases of chronic disease of the male urethra, brought to a close by January, 1886, in which the endoscope had been employed, to form the material on which this paper is based.

The mechanical apparatus which I have made use of deserves to be described first. A good light is one of the principal conditions of a successful examination by the endoscope. At first I used a common portable gas-lamp, with an Argand burner, but soon found its light deficient in intensity and in color. Next I tried the direct sunlight, caught and reflected by a plain mirror attached to the frontal elastic bandage. It afforded the most excellent illumination even of the deeper parts, so as to permit of observing the natural color of the mucous membrane. In fact, I believe that some details, particularly finer vascular changes during the formation of new capillary blood-vessels, for instance, can hardly be recognized by any other light. Its main drawback, however, is that it can not be had at all times, especially during winter-time, so as to occasionally necessitate a delay of the examinations for a whole week; while the heat in summer makes its application very trying, not to forget passing clouds obstructing the view, and thus extending the examination over an unduly long time. Diffused daylight I did not find of sufficient intensity, and white clouds, which afford a strong enough light, are not always at hand when desired. Finally, through the kindness of Dr. F. Zinsser, I came into possession of a Vienna kerosene-lamp of peculiar construction, having twelve solid wicks of the caliber of a pencil circularly arranged around a carbon plate, which deflects the flame somewhat outwardly. It affords a slightly yellow, but brilliant, steady, and reliable light, is always ready for use, and has been found to answer all general purposes during constant use for several years. A common laryngeal mirror attached to the frontal bandage is used as a reflector.

As no suitable endoscopic tubes, similar to those of the Vienna author's, could then be found in the New York market, I sought the aid of Mr. F. Eissner, of No. 18 Third Avenue, to whom I am greatly indebted for the intelligent execution of my wishes and for valuable suggestions. Intent on having an instrument as plain and simple as possible, after several experiments we agreed upon an endoscopic tube which now has been used constantly by me for several years, and which, I understand, has been found useful and convenient in the hands of several other gentlemen of the profession. It represents a modification, or rather a simplification, of the straight, simple endoscopes of Gruenfeld (Fig. 1 of the adjoining cuts) and Steurer (Fig. 2), being more similar to the one described by the latter (in the "Vierteljahresschrift f. Dermatologie u. Syphilis," 1876, 3), and consists of a straight tube, with rectangularly cut ends, and a disc attached to the ocular end. Fig. 3 shows that I have dispensed with the funnel-shaped part of the ocular end, which has also been considered rather superfluous by Auspitz ("Vierteljahresschrift f. Dermatologie u. Syphilis," 1879, 1), for, while increasing the distance between the eye of the observer and the object of examination, it offers no advantages by increasing the intensity of the light by deflecting any rays, as only nearly parallel rays can reach the end of a tube eight to thirteen centimetres long. The disc attached by Steurer has been retained, because it serves the purpose of compressing the urethra and the entire penis backward toward the symphysis, and of reducing its entire length to such a degree that, by a tube much shorter than the urethra itself, the latter can be examined in every part under more favorable circumstances. The tube itself is now made of coin silver in preference to cannules made of brass, German silver, or hard rubber, because silver can be worked in much thinner tubes, which, in consequence of the wider bore, furnish a wider field of view. Besides, they are much less affected by the chemical action of caustic and astringent substances, which are used for application through the endoscope, and can be kept clean and smoothly polished much easier. Like Auspitz (*l. c.*), "I have been taught by experience that the dissipated reflexes, dreaded so much by others, do not increase in quantity if the inner surface of the tube is always kept clean and smooth, while, on the other side, in blackened tubes the intensity of the light is greatly impaired by a considerable resorption of light-rays." The reflexes from the surface of the disc, however, I found very annoying and obstructive to good observation. This was obviated by riveting an unpolished hard-rubber plate, 1·5 millimetre thick, to the metal disc of Steurer, which, being clean and less liable to be injured by chemicals, insures a firm and comfortable grip, particularly during exploration of the membranous and prostatic portions, wherein the tube has to be kept securely and firmly, and to be moved cautiously against the by no means trifling resistance of the sphincters. The disc has a diameter of four centimetres—somewhat larger than Steurer's—to prevent the overlapping of an abundant prepuce while shoving back the penis over the tube. The obturator, conductor, or plug of my instruments does not differ much from that employed by others. The silver tubes have been furnished to me by Mr. Eissner in different sizes—viz.:

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* Read before the physicians of the German Hospital and Dispensary of New York, April 9, 1886.

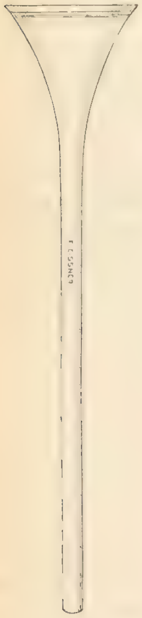
Fig. 1.

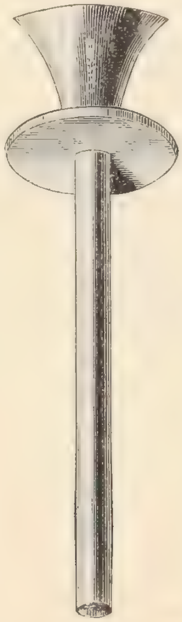
Fig. 2.

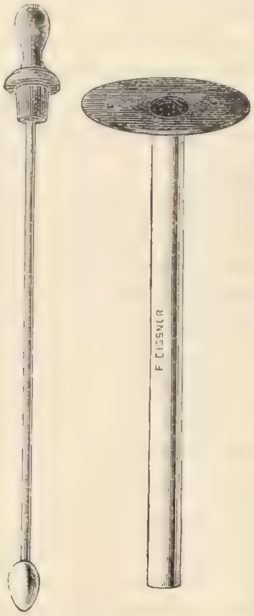

Fig. 3.

Charrière's scale, No. 27,	of 11 and 14	ctm. length.
" " " 25,	" 11 " 14	" "
" " " 24,	" 11 " 14	" "
" " " 23,	" 8½, 13, 15, and 17	" "
" " " 21,	" 8½	" "
" " " 18,	" 8	" "

As a rule, it is advisable to use the widest and shortest tube that passes the meatus, as long as the mucous membrane is not distended too much; for the examination of the membranous and prostatic portions, however, it is preferable to be satisfied with a tube of smaller caliber. The anatomical formation of those parts renders them more liable to slight injuries and to hæmorrhage; only in exceptional cases can tubes above 24 Charr. be used with advantage for the deeper parts. By soldering a fine silver ring around the visceral end of the tube and smoothing it off again to a certain degree, the advantage is gained that the edge of the tube, thus strengthened, is not bent or made ragged so easily by injuries, and that the instrument can be introduced entirely or at least for some distance without a conductor, thus affording a more natural and sometimes more valuable inspection. The thickening of the shell of the tube, however, increases the difference between the edge and the bulb of the conductor so much that it makes the introduction more painful, thereby probably outweighing its advantages. The straight, open, rectangularly cut tubes are the only ones I have ever used; therefore I can not judge of the usefulness of other instruments described by Gruenfeld as the straight and curved fenestrated and the laterally fenestrated endoscopes. Graduating the tubes for the purpose of locating the diseased parts of the urethra distinctly is of doubtful value, because the urethra is either intentionally or unintentionally extended or compressed so easily during the examination that it becomes rather uncertain to fix the distance from the meatus in an exact manner.

The instrumentarium is completed by a number of strong galvanized wire rods, one end of which is bent into a ring serving as a handle, the other filed sufficiently rough to hold small pledgets or tampons of surgical cotton for clearing the surface and for the application of medicinal substances. A small ring-shaped curette on a long wire handle is an instrument of various usefulness.

The best position for the patient during endoscopic examination of the urethra is that of reclining on a strong, plain table, or on a surgical table or chair, the upper part of the body moderately elevated, the buttocks as near as possible to the edge of the seat, the thighs well separated, the feet resting on the round of the chair on which the examiner is seated. By adding the pillow of the lower part of my Marx exploring chair, the seat reaches a height of thirty-three inches from the ground, which enables me to examine the pars pendula as well as the deeper parts without changing my position or kneeling between the lower extremities of the patient, or distorting my neck too much in following the ocular end of the instrument in its movements. The lamp is placed to the right on a small table, which holds the instruments, cotton-holders, and medicines; the tube is held and directed by the left hand, leaving the right one to adjust the light and reach the mucous membrane with the cotton pledgets.

With the aid of such instruments it is not difficult, after some experience, to inspect minutely in every case every spot of the mucous membrane from the orifice to the bulbous part, and in the majority of cases the membranous and prostatic portions as far as the neck of the bladder; there are cases, however, where it is impossible to pass the external sphincter. Of course only a small portion of the lining of the urethra can be seen at a time, but as the tube, on being withdrawn, passes every point of the canal, the mucous membrane comes into view bit by bit. The shape in which the interior of the urethral channel presents itself in the central portion of the tube has been differently compared to a cone or to a funnel; I should rather compare it to a paper filter, because the surface generally shows more or fewer fine folds converging to the center. The central position of the tube—*i. e.*, the one parallel to the axis of the urethra—is the most favorable one to judge of the general condition of the mucous membrane as well as of the surrounding tissue, as it best reveals the degree of elasticity, softness, and swelling of the parts inspected by the changes in the folds, and the manner of bulging. The surface of the mucous membrane itself, irregularities of the epithelial covering, indentations and recesses in the same, particularly the lacunæ of Morgagni, are better shown by an eccentrical position of the visceral end, wherein the part under examination presents itself perfectly flat and level to the eye. To get a quick summary view of the whole interior lining of the urethra, I prefer to pass the tube in spiral movements either backward from the bulbous part or centripetally, thus gradually spreading the entire surface before the eye. It is not my intention to give a minute description of the appearance of the interior of the urethra, nor to consider the significance of the changes in color, nor of the different reflexes. I refer those who desire information on all the details to Gruenfeld's excellent book, in which a clear and full account of them is given ("Die Endoskopie der Harnröhre und der Blase," by Joseph Gruenfeld, Stuttgart, 1881).

I have never examined a urethra which I had reason to believe was entirely healthy; but I have often observed conditions of the mucous membrane, over its full extent, or over a part only, which, to judge from what we know about the anatomy of the organ and from descriptions given by other observers, I felt justified in assuming as normal. The healthy mucous membrane shows a more or less pale-pink color, quite often with stripes of a lighter shade, and a smooth, glistening surface, giving the appearance of a soft, dull, silk tissue. For practical purposes, naturally, it is more important to study the appearance of the urethra in the state of disease. Most authors have described the local symptoms of several forms of acute urethritis. Generally they have been classified together with the chronic cases, not to the advantage of clearness in distinguishing the same, I believe. I have never felt justified in using the endoscope in a case of acute inflammation, not seeing a necessity for doing so, and because the introduction of the instrument not only is necessarily painful, but may really do harm. By far the greater number of cases in which I have employed the endoscope were those of patients who, without any other inconvenience, pain, or sensation, showed a more or less copious mucous or purulent secretion, visible mostly in the morning only, either persisting for months or reappearing after short intervals of apparent cure on the slightest provocation by drinking or sexual irritation—*i. e.*, cases of gleet or chronic urethritis or gonorrhœa, if such a classification is admissible. Some patients were suffering from stricture without a discharge being noticeable; others complained of the well-known appearance of a grayish drop during defecation or after micturition; finally, there were some who complained only of pain, burning, itching, or pressure in the urethra without the presence of a discharge. Among my 100 patients, in 84, chronic discharge from the urethra was the principal complaint; 8 applied for treatment on account of unpleasant sensations, 4 of whom showed a slight discharge; so that in 88 there existed a chronic secretion, 4 had stricture, and 4 prostatorrhœa. The discharge had lasted for a more or less continued period—in no case less than three months, in some for several years. Nearly all of my patients had been previously under the care of other physicians, a large percentage having been treated with sounds; not a few had been operated upon, mostly "for stricture."

It can be stated in general that endoscopic examinations of such cases soon make the erroneousness of some of the old doctrines proclaimed and confirmed in text-books, etc., apparent. The first experience is, that the regions pointed out by the patients as spontaneously sensitive or particularly tender to the touch of a bougie à boule, as a rule, show no pathological condition of the mucous membrane (as might be expected), but these localities are even more frequently found in healthy condition. Nor is it found to be true that the posterior parts of the pendulous urethra, the bulbous or membranous portions, are usually or even more frequently affected in chronic urethritis, as has heretofore been maintained; it appears, on the contrary, that in by far the greater number of cases the anterior and central portions are the regions principally affected, that sometimes the two inches nearest to the meatus alone are diseased, and that these very cases may prove the most obstinate ones. Still, on these two doctrines the adversaries of the endoscope have mostly relied, as well as on the supposition that the bulbus was the usual seat of chronic inflammation, and Guyon and his pupils have founded their treatment by "instillations" in the deeper urethra. Among my 100 cases the seat of morbid changes was found to be: the prostatic and membranous portion alone in 5 cases; the prostatic and spongy alone in 2 cases; the prostatic, membranous, and spongy in 22 cases; the membranous and spongy alone in 26 cases; the spongy or pendulous portion alone in 45 cases. There participated at all, the prostatic portion in 29 cases; the membranous portion in 53 cases; the spongy in 95 cases; the bulbous specially in 44 cases.

The pathological conditions themselves, as they appear through the endoscope, are of great variety and show numberless combinations, so that one meets with great difficulty in trying to arrange them systematically into definite groups. They may pertain to abnormities of color, of the smoothness of surface, or of the elasticity and resistance of the tissue of the mucous membrane and of its surroundings. The color may vary from the natural pale-pink in one direction to the pure, glistening white of a tendon, and in the other to scarlet, to the darkest shades of bluish or brownish red, or into slate-color; these different shades may extend continuously over a large part of the urethra, or may be restricted to single spots of the size of a pea or even smaller, quite often appearing in radiate or longitudinal stripes. In considering the value of changes in the color of the mucous membrane, account has to be taken not only of individual differences, but also of the effects of the introduction of the instrument, of the pressure of the edge of the tube, the touch of a cotton-wound wire, etc., which are apt to effect a temporary, often quite sudden change. However, more permanent discolorations do exist. In one case I found the upper wall of the urethral cavity, to the extent of nearly two inches, of a dark-red color, like raw beef, but perfectly smooth, contrasting strangely with the normal pink of the lower surface, a condition which was observed to decrease in intensity at several subsequent examinations. Sometimes the dull luster of the healthy mucous membrane gives way to a more glistening, satin-like appearance, while the perfect smoothness of the surface is retained.

More distinct features appear in relation to the smoothness of the surface of the mucous membrane. Under favorable conditions of light, a fine network of small capillary blood-vessels can be distinctly observed. In other cases the surface has a more velvety appearance, as if composed of numerous, most closely apposed hairy points with light reflecting from each of them. But more regularly we meet with what has been generally described as the granular condition of the mucous membrane: the dark-red, uneven surface is broken by elevations of the size of a rape or millet-seed, which are placed more or less closely together, leaving depressions of a deeper, more brownish color between them. According to the size of the granulations, but little of the smoothness of the surface may be lost, or the affected part may look like undressed kid-leather, or like a strawberry. The light is reflected in the shape of distinct points from the granular elevations. This granular appearance of the mucous membrane has been considered by Désormeaux, and by the greater number of authors, as the regular and constant pathological condition in gleet, so as to identify urethritis granulosa and chronic gonorrhœa. Different opinions have been given on the origin of these granular elevations. To bring them in connection with the normal papillæ of the mucous membrane seems hardly justified, as they are observed in portions of the urethra to which the papillary construction does not normally extend. It appears not impossible that the simple mucous glands, which exist all over the urethra, may have something to do with the granular condition.

It has been stated that granulations are found more frequently in certain portions of the urethra, and that they follow certain rules as to the extent of the lesion. It is true I have seen this condition often enough in the bulbous portion, but as well in other parts, from the membranous and prostatic tracts to the fossa navicularis, and here my experience is in accord with Gruenfeld's observations. But I have been struck by the frequency with which I have met with granular patches in connection with dilated and inflamed lacunæ of Morgagni, a fact which I have not found mentioned distinctly by any author. I am inclined to attribute a much greater importance in the pathology of chronic urethritis to these organs than has been done by the other authors on this subject. According to Henle, these recesses or small cavities, visible to the naked eye, are passages which are lined by the mucous membrane and its epithelium, into which real glands open only in rare instances. From more recent observations by G. Overdieck, however ("Ueber Epithel und Drüsen der Harnblase und weiblichen und männlichen Urethra," Göttingen, 1884), it appears that the lacunæ of Morgagni should be considered as compound glands, which well seem able to take a greater part in the pathological conditions of the urethra. In not fewer than sixty-three among my one hundred cases I found an abnormal condition of the lacunæ of Morgagni, or at least a distinct presence of the same. Sometimes only after the disseminated granular patches of the mucous membrane had been under the influence of local treatment did the lacunæ make their appearance in the center, often as large as a hemp-seed, not seldom partly covered by a semilunar fold of the mucous membrane in the shape of a pocket. The edges now appear rough, as if eroded, now smooth, like elevated walls surrounding the recesses; again they appear as elevated craters resembling the annular mountains (*Ringgebirge*) on the map of the moon. In accord with Henle, I found the lacunæ most frequently along the upper wall and in the folds or corners which are formed on both sides by the upper and lower half of the membranous lining of the urethra in the natural, undistended position; however, they are found often enough on the lower surface. As I have observed in quite a number of cases that while under the proper local treatment the lacunæ of Morgagni gradually changed their appearance by showing smoother and lower edges, and diminishing in deepness, the discharge gradually became less, and finally disappeared, I feel justified in considering these glandular structures as the seat of the inflammation and as the source of the discharge, respectively, of the threads which are found in the urine in decreasing quantities. In a paper on latent urethritis ("Annal. des malad. des organes génito-urinaires," ii, p. 78 *et seq.*), T. P. Guiard, a pupil of Guyon, comes to the conclusion that the urethral glandular apparatus probably plays an important part in the pathology of urethritis, and that a glandular urethritis really exists. There is no reason, he argues, why the small glands should remain intact while the larger ones, like the epididymis, Cowper's glands, and the prostate, are known to be frequently attacked, and he suspects that the inflammation has extended to the glands whenever a case obstinately resists treatment, particularly by instillations of nitrate of silver, provided a constitutional cause is wanting. And, although he cites Morgagni and Terranéus as having actually observed a diseased condition of the lacunæ, he misses the evident proofs of glandular urethritis. Perhaps he would find his suspicions confirmed if he only would look through the endoscope, but it seems that Désormeaux is entirely forgotten in his own country!

I here must mention that in two cases, which, however, do not appear among my records, but which I remember quite distinctly, I noticed at a distance of about one inch from the entrance into the membranous portion, on moving the tube forward in a centripetal direction, that suddenly a small drop of a white, milky fluid oozed from a minute spot in the upper surface of the urethra. This I could distinctly observe on several examinations at different times and at the very same spot. It is probable, from the locality, that the opening from which the fluid came was the mouth of the duct of one of the glands of Cowper.

Quite a peculiar condition, similar to granular formation, but of some distinct features, was observed in several cases, where the patients complained of a burning pain along the urethra without any discharge. It appeared in the shape of dark, brownish patches of the size of a pea or a bean, the surface of which was dry, slightly eroded, not unlike morocco leather, seated principally in the lateral folds. Being touched with Lugol's solution, these patches assumed a dark-brown, nearly black color, which made them appear much more distinct, the surrounding portions of the mucous membrane remaining unchanged by the iodine. With the disappearance of the patches under the influence of repeated applications of iodine in the watery solution, the disagreeable sensations of pain and burning gradually gave way.

Nearly unanimously the authors on the endoscope have maintained that granular urethritis is regularly followed by a consecutive infiltration or thickening of the mucous membrane, and that it unavoidably leads to the formation of stricture if left to itself. This I decidedly contradict. It is true that I have observed the symptoms of thickening of the urethral tissue quite often beside a granular surface—*i. e.*, disappearance of the folds and distortion of the reflexes, together with resistance on introduction of the tube—but, on the other hand, I have by no means exceptionally found the mucous membrane showing normal folds, normal reflexes, and not the slightest resistance or bulging-in on withdrawing the tube in the presence of granular patches of undoubtedly long standing. Again, I have seen the mucous membrane perfectly smooth and of a natural pink color, where in circumscribed regions (more frequently in the central portion of the spongy urethra) the urethral wall appeared decidedly infiltrated, bulging in as a rather rigid mass into the lumen of the tube. The same condition of the surface could be observed over other infiltrations, which extended over some distance in the shape of ridges. I found those ridges about two or three inches from the meatus in three patients with naturally very small and narrow urethras, being very rigid and extremely sensitive; the treatment, although finally successful, was tedious and laborious. I therefore conclude that a granular condition and infiltration of the mucous membrane may exist independently of each other.

There exists still another partial thickening of the mucous membrane in the shape of stripes, now of lighter, now of darker, color than the surrounding parts. Gruenfeld describes them as formations of new layers of epithelium (*Epithelauflagerungen*), but he seems to be somewhat in doubt about their real nature. In some cases the stripes appear as prominent white ridges, and then new formation seems probable, while in other cases they are depressed, so that a shrinkage from cicatrization may be the cause. In several instances I have found the mucous membrane of the entire spongy urethra perfectly smooth, white, and rigid, with sharply defined, small lacunæ, giving the impression of considerable hardening of connective tissue. Rightly, however, Gruenfeld has warned us not to take the endoscopic picture as sufficient evidence of the nature of pathological changes, as it still requires microscopical examination to decide the question. This must be particularly maintained of another pathological phenomenon, which I have not observed myself, but which has been mentioned by several authors as an analogue of the real trachoma of the conjunctiva, where large, corn-like substances, imbedded in the mucous membrane, project over the surface.

Less frequently than with new formation or thickening of tissue I have met with loss of substance. Now and then you encounter portions of the urethra which, deprived of the epithelial layer, show a yellowish, dirty surface similar to superficial defects in the oral cavity; they are extremely sensitive to the touch, and I think they would best be designated as erosions. I found them as the only substantial abnormities in three cases as one of the most obstinate forms of disease. They remind me very much of a peculiar form of urethritis described by Gruenfeld as urethritis herpetica or phlyctænularis; but it seems that such a name would rather indicate an acute, typical disease than a chronic one. In fact, I have twice observed the appearance of circumscribed lesions of substance during chronic urethritis—once as a simple loss of the epithelial cover, presenting a clean, red surface with slightly deeper-colored margin, and again as an irregular, flat ulcer with distinctly yellow ground, which healed without a scar in a comparatively short time under the use of iodoform. These I consider to have been really attacks of herpes. I shall not leave unmentioned the occurrence of several losses of substance which were beyond doubt caused by the sharp edge of the tube while not being handled with sufficient care, but they were found to be healed at the next examination without leaving any signs. I have never observed a real chronic ulceration or a chancre in the urethra, such as have been described by several authors.

Since the case reported in 1881 I have not met with polypi in the urethra, but I have observed in four cases papillary excrescences or vegetations of the deeper portions of the urethra, which, at least in two cases, showed all the characteristic features of the condyloma acuminatum. In the orifice of the urethra, and near to it in the fossa navicularis, they are met with quite frequently, but there are no cases on record, as far as I know, where they extended in greater number for three or four inches backward toward the bulbus. I intend to report these cases more fully in a separate paper, together with a case of angeioma cavernosum of the upper side of the spongy urethra. Once I saw what I should like to call a real surgical granulation of the size of a hempseed in the posterior part of the spongy urethra. It was definitively cured by a single application of nitrate of silver.

Strictures have always been an object of great interest to every one using the endoscope, those of large caliber as well as the narrow, rigid ones. The existence of the former is easily proved by the endoscope, but it seems open to question whether it is right to call a stricture what really is often only a swelling of transitory nature, not a definite permanent condition. As stated before, I have frequently observed thickening and greater rigidity of the urethral walls with or without granular condition of the mucous membrane, which, on examination by the bougie à boule, produced the very same signs on the presence of which the diagnosis of strictures of large caliber is founded. In several cases I have watched these swellings from their very beginning, have noticed their steady growth from the time of one examination to that of the next, so as to necessitate the subsequent use of smaller-sized tubes; but I could just as well watch their gradual disappearance under proper treatment and their return to normal conditions. I do not mean to deny, however, but rather to confirm by other observations, that such temporary swellings may become permanent indurations, and finally real strictures.

The appearance of chronic cicatricial strictures through the endoscope is very interesting and of great variety. I can not give a better general description of the same than that given by Fuerstenheim ("Berl. klin. Woch.," 1870, p. 532). "The configuration of strictures is quite variable; it is either—unfortunately, but very rarely, in old and indurated strictures—funnel-shaped, the narrow part directed toward the bladder, easily allowing a sound to enter, or they come into view as an obstructing surface with a small, wart-like prominence in the center, or as a rough, uneven mass with many small prominent points, among which it is very difficult to find the entrance into the stricture. Sometimes between the wart-like elevations small islands of natural but red mucous membrane remain intact. On proceeding to withdraw the tube, the elastic normal mucous membrane can be noticed to close up like a curtain around the immovable, rigid face of the stricture. The point of a probe does not cause an impression, but moves the whole mass before it." A similar description has been given by Cruise, of Dublin ("Dublin Quart. Jour.," May, 1865). In several instances where, on examination by bougies, the diagnosis of stricture had been made, endoscopic inspection showed no trace of a narrowed channel; in one case evidently a very dilated lacuna of Morgagni had invariably caught the point or the olive of the bougie and prevented its farther introduction, thus simulating stricture. In other cases where the endoscopic tube was arrested at a certain point during introduction, nothing but an erosion or a highly inflamed patch of lacunæ was detected, which probably had caused reflex contraction of the urethral muscles. It was not unusual to easily pass the tube (often even without an obturator) through a portion of the urethra which was supposed to be strictured. Even the membranous portion sometimes allowed the passage of the endoscopic tube, when sounds and bougies had met with insuperable spasm. The prostatic portion of the urethra can be inspected in most cases, and the colliculus seminalis with the caput gallinaginis easily be made out, unless the discharge of blood, which may take place quite easily, obstructs the view. In several instances I could distinctly see an oblong fissure on the height of the colliculus, which I had to take for the entrance to the utriculus masculinus. I could never clearly trace the openings of the seminal ducts nor of the ducts of the prostatic glands, although the location of the same was clearly indicated by the sudden appearance of a non-bloody fluid in the grooves adjoining the colliculus. The difference in the appearance of the living organ from that found post mortem is nowhere so conspicuously prominent as in the prostatic urethra. It has already been stated that the granular condition is not unusual in the prostatic portion. In other cases where impotence and nervous disorders were complained of I could notice conditions of the colliculus and of the caput gallinaginis which probably were pathological, but I do not feel justified in drawing any conclusions on the strength of my observations. For I believe that in the configuration of this extremely complicated region there reigns a great individual variety, not less distinct than, for instance, in the configuration of the nose. Now the colliculus appears like a flat, broad, ribbon-like eminence, and again the caput is elongated forward into a fine point reaching near to the bulbus, or beginning abruptly like a promontory; or the colliculus comes into view like a tumor, easily to be mistaken for a polypous growth, etc. Besides, the erectile nature of some of these parts has to be considered. As long as we have not a more exact knowledge about the limits of normal individuality, it seems premature to speak so decidedly of hypertrophy of the colliculus, etc., as Gruenfeld does. I must acknowledge, however, that Gruenfeld openly avows that he often found a normal appearance of the prostatic urethra, where, from the symptoms present, he expected to find pathological conditions. In cases where epididymitis had preceded, I have been astonished to but seldom find signs of inflammation in the recesses next to the colliculus, while in the majority of cases nothing indicated a diseased condition of the mucous membrane surrounding the entrance of the seminal ducts. I have no doubt that by and by we shall gain more distinct knowledge of the normal and pathological conditions of the prostatic urethra.

It is a great advantage of the straight, open endoscopical tube over all more complicated instruments of the kind that it allows the immediate application of medicinal substances, or of surgical manipulations, to any part of the mucous membrane found diseased. The medicinal applications are made on the same general principles as upon other mucous membranes of the human body. All observers agree to have been astonished to find the mucous membrane, particularly the deeper part of the urethra, so tolerant against the direct applications of the stronger astringents, and even of caustics, considering the extreme sensitiveness of the same parts against much milder solutions, as, for instance, of nitrate of silver or of the bichloride of mercury, if used as injections with the ordinary urethral syringe. Cotton pledgets attached to wire rods are used by me exclusively in preference to brushes. They are always fresh and clean, are easily replaced, and give absolute security that no other spot is touched than the one intended, as its effects are only communicated to the mucous membrane by actual contact. The solutions which I use most frequently are: Nitrate of silver at 2½, 5, 10, 20, and 50 per cent.; sulphate of copper, 3, 10, and 30 per cent.; bichloride of mercury, 1 per cent.; tannin, 10 per cent., in equal parts of glycerin and alcohol; liquor plumbi acetici; liquor ferri sesquichlorati, with equal parts of glycerin; chromic acid, 10 and 50 per cent.; tincture of iodine; Lugol's solution of iodine (iodine 1, iodide of potash 2, water 12 parts); carbolized iodine (equal parts of Lugol's solution and pure carbolic acid); iodoform powdered, and in a saturated solution in ether; besides nitrate of silver and sulphate of copper in substance. It is impossible from present experience to state definitely under which conditions the one or the other remedy, the one or the other solution of the same substance, is to be preferred. I must own that I have acted altogether empirically, finding great individual differences as to sensitiveness and effectiveness. In general, the solutions of nitrate of silver and sulphate of copper must be considered the most useful remedies, the latter principally where the lacunæ of Morgagni are the obvious seat of the disease. The strongest solutions of silver, chromic acid, and copper, and the crystals of these salts, were applied only for the destruction of such papillary excrescences as could not be removed by the polypi guillotine or by the ring-shaped écraseur. Examinations and applications were made at intervals of from three to seven days, according to the conditions of the urethra and to the strength of the remedy applied, and a subsequent change in the condition of the diseased portions could be nearly always observed. Generally the immediate effect is an increased flow from the urethra for twenty-four to thirty-six hours, after which time the discharge begins to diminish spontaneously to its former or even a diminished quantity. Sometimes the urethra becomes perfectly dry for about twenty-four hours, to be followed temporarily by more copious discharge. At subsequent examinations the mucous membrane appears less red, of smoother surface, the granulations less distinct, the lacunæ less excavated, with sharply defined edges and not as moist as before, until gradually the whole appearance becomes more and more of the normal color and smoothness. Injections are generally continued at first twice a day, but, after some improvement has set in, are omitted altogether. In only a small number of cases internal medicines were administered; in the greater number sole reliance was placed on the local treatment. The number of applications and the time over which the treatment was extended differ very much, depending often on the regularity with which the patients were able to attend; in one case a single application effected a cure; in general, the applications varied from two to twenty-five in number, distributed over several weeks to several months. To close the treatment by the introduction of large steel sounds was sometimes found beneficial. I have never been able to understand why moderate smoking should be detrimental to the urethra, nor have I found good reasons given by any author why smoking ought to be forbidden to patients suffering from chronic gonorrhœa; therefore I have allowed the moderate use of tobacco to my patients. While I consider the stronger alcoholic liquors positively injurious, I have not interdicted the moderate use of wine, particularly light claret, or of good, well-fermented beer, to those patients who were addicted to their use; and those who were sure to resume this habit as soon as they would consider themselves cured were rather encouraged to return to their usual way of living before the treatment was closed. Experience has shown to me that the results in such cases were not different from those where the patients had never been used to take any alcoholic drinks whatever, or were abstaining during treatment.

New growths like polypi or vegetations require removal by surgical means or by strong caustics. Gruenfeld has constructed quite a number of instruments for this purpose. I have found the instrument described by me in 1881 for the removal of polypi quite satisfactory in all cases where the vegetations were large enough or not too remote from the meatus; the ring-shaped curette mentioned before was sometimes used to advantage in the anterior parts of the urethra. Vegetations or condylomata acuminata are just as obstinate, or even more so, to return after removal by cutting or burning when they make their appearance within the urethra than outside; but I finally succeeded in all the cases in thoroughly and permanently eradicating the same.

In cases of stricture the endoscope may prove useful in various ways. In a few cases of so-called impermeable stricture which were treated in the German Hospital, after several unsuccessful trials to enter or pass even the finest instruments, I succeeded in discovering the entrance of the stricture, in the shape of a narrow recess eccentrically located among several hard prominences, and in introducing a filiform whalebone bougie through the stricture to the bladder. Once entrance gained, one of Gouley's tunneled sounds was passed over the whalebone, and thus the path was opened for successful further dilatation, so that within a few weeks I was able to inspect the entire length of the urethra as far as the prostatic portion through a tube No. 23 Charr., and found a smooth, still somewhat rigid, mucous membrane throughout the former seat of stricture. In other cases, which bled on being touched only by bougies or sounds of any caliber, so that even the smallest numbers could not be passed or entered, endoscopic examination revealed the presence of small patches of sound mucous membrane among cicatrized and granulating tissue. Here I introduced steel sounds No. 16 to 18 Charr., and gradually forced them forward through the stricture, being able to make absolutely certain that the sound kept within the normal urethral channel and avoided false passages. In this way I gradually pushed on until the instrument reached the bladder; afterward further dilatation to Nos. 23 and 24 proved quite easy and free of danger. In this way I cured a stricture which for fourteen years had baffled all attempts to pass an instrument. Its deep location, extending through the entire membranous portion into the immediate neighborhood of the bladder itself, would have rendered any urethrotomy, either external or internal, a very precarious proceeding.

In every case of stricture the positive acquaintance with the configuration of the impediment to the free passage of the urine or to the introduction of a bougie which can be obtained by endoscopic examination will prove of great value to correctly judge which course of treatment ought to be taken. The obstruction of the urethral channel may extend to the entire circumference of the urethra, or it may be situated in the upper or lower or in the lateral portions of the urethral tissue. Internal urethrotomy, and, to a certain degree, even external urethrotomy, are executed more or less blindly; in the internal operation the cutting is done either upward or downward, and therefore may divide perfectly healthy parts and leave the real obstructing mass untouched if situated laterally. External urethrotomy may leave the indurated upper wall intact while opening a way through the normal floor of the urethra. If a stricture has to be operated upon, the ideal way would undoubtedly be to operate under the eye through the endoscope. That this can be done has been shown by Gruenfeld. I have no experience of my own so far, but I shall certainly try to follow the example of Gruenfeld as soon as I find an occasion, and I have no doubt that, sooner or later, ways and means will be found to make urethrotomy no longer an uncertain procedure. Undoubtedly electrolysis of stricture, too, could be applied more effectively if performed after careful inspection of the obstruction.

As to strictures of large caliber, I have previously stated that they often can be cured by applications of strong solutions of nitrate of silver, tincture of iodine, etc., and do not always require surgical interference. In two instances I observed that I had involuntarily performed divulsion of a circumscribed swelling of the mucous membrane by passing a somewhat large endoscopic tube, leaving a slightly bleeding longitudinal fissure passing through the center. It healed quickly under application of powdered iodoform, leaving no trace of the wound nor of the swelling. This experience seems to prove, indeed, that such "strictures" can be cured by cutting, or rather by scarification, the limit of which such an operation ought not to surpass. If surgeons would only take the trouble to look at the strictures before they begin to operate, I have no doubt many an operation would be done more cautiously or would be left undone, and not to the detriment of the patients. To show how lightly and indiscriminately this cutting is done at present, I shall cite a passage from a paper published but recently ("Medical Record," May 8, 1886, p. 524), in which the author, speaking of an obstinate case, says: "In three weeks the discharge had dwindled down to a watery condition, which remained in spite of all I could do. After trying all known means, *I was compelled to cut him.* He stood the operation badly and made a slow recovery, but in two months the wound had healed and the discharge had entirely dried up." Here is not even a pretense of a stricture; it is not mentioned where or what was cut, but "the patient was cut" simply because he could not be cured of his discharge by all known means (including the endoscope?). If only surgeons would take pains to inspect the results of their work some time after operation, they would undoubtedly be less reckless and less quick to cut. If they could see such deep, furrow-like, inelastic scars, extending through the mucous membrane into the corpus cavernosum for an inch or more in length, as I have met with in several instances, they would understand, on but little reflection, that the interruption of the continuity of an elastic tube by such rigid masses can not be irrelevant, but that it must act as an obstruction or as a contraction whenever the urethral channel is extended by the physiological actions of micturition, erection, and emission of semen. It is certainly not to be wondered at, if constant traction and retraction of healthy parts by such a scar cause local as well as reflex irritation.

It is a somewhat delicate matter to speak of the final results of the endoscopic treatment of chronic urethral discharge, and it was not without some apprehension of self-delusion that I approached my records for a summary of the same. I was agreeably surprised, however, to find a more favorable state than I had expected myself, even after eliminating all cases of doubtful cure, and being as sincere and strict as possible in stating a case as cured. Among the 88 cases in which a chronic discharge from the urethra had been present, 42 were positively cured—*i. e.*, in 42 cases I have positive evidence that the patients were free from any discharge for at least two months after the treatment had been stopped, and after they had followed their usual mode of living without restraint, except avoiding excesses *in Baccho et Venere.* Eleven were apparently cured when last seen, but, being without any later information about their condition, I have not felt justified in stating them as certain cures, but have preferred to put them into a separate class. In 8 cases the discharge was not entirely removed until after some other treatment had been substituted; it remains doubtful how much the endoscopic treatment had really contributed to the final result. That it was not without good effect appears from the fact that the same treatment that led to a final cure had been ineffectually employed before the local treatment had been resorted to. It can therefore be fairly maintained that in 61 cases out of 88 the effect was favorable. There were, further, 16 cases in which the endoscopical treatment was not continued sufficiently long, or where really only one or two examinations were made, while in some others improvement had been achieved, when for some reason or other treatment was discontinued. This leaves 11 cases in which either permanent advantages could not be obtained in spite of a sufficiently extended treatment, or even adverse symptoms appeared after the application, which rendered it advisable to discontinue the method. I am unable to give any reasons for this experience. In general, no evil consequences could be observed to follow the endoscopic treatment except some pain within the first twenty-four hours after the applications, and an increase of the discharge for the same period. Epididymitis, cystitis, and adenitis, which may complicate chronic urethritis during any treatment, either with or without instruments, have been met with, but certainly not more frequently than during the use of steel sounds, injections, etc. Except for these complications, my patients were always able to attend to their business.

It remains to briefly consider what claims the endoscopic treatment can make upon the attention and recognition of the profession. I do not mean to put too much weight on the cases of new growths within the urethra, which can not be recognized or treated by any other method. I shall not repeat what I have stated before about the importance of endoscopic examination of strictures. The nearest and the most important field for the endoscope will always be chronic gonorrhœa. Those who consider a chronic discharge from the urethra a trifle will not think of taking the trouble to apply the endoscope, nor those who are not ashamed to treat a patient with the largest possible steel sounds without affecting the slightest change for months or years, or, in fact, as long as the patient does not give it up in disgust himself. But he who has ever understood what this miserable drop of discharge in the morning really is to the patient—how it destroys all enjoyment of life, embitters every pleasure, how it estranges him to the society of his friends, that it can make a man crazy and drive him even to self-destruction—will gladly welcome any means that enable him to make one step nearer to the successful treatment of that terrible disease. If Reginald Harrison is not universally condemned for performing external urethrotomy and drainage of the bladder in a number of cases for the sole purpose of curing a chronic urethral discharge, certainly the use of the endoscope ought not to be considered audacious or superfluous any longer. While it is neither infallible nor the only method by which good results can be obtained, it undoubtedly has very often proved beneficial where other means have failed, and will continue to do so in still higher degree the more its use is developed. Like laryngoscopy, rhinoscopy, ophthalmoscopy, etc., the endoscopy of the urethra has a rightful claim to be called one of the scientific methods of diagnosis and therapeutics.

No. 222 East Nineteenth Street.

A NOVEL PROCEDURE FOR THE REMOVAL OF SUBGLOTTIC LARYNGEAL GROWTHS,

*With the Report of an Illustrative Case.**

By WILLIAM CHAPMAN JARVIS, M. D.

In view of the numerous treatises on laryngeal growths which have appeared in print within the memory of laryngoscopic and even in pre-laryngoscopic times, it is reasonable at this period to expect something more than the customary recourse to a unique pathological condition as an ample basis for the presentation of another monograph. A careful study of the literature of the subject shows that cases similar to the one explained in the title of my paper, supplemented by the successful eradication of the neoplasm, have heretofore been considered sufficient reason for the elaboration of interesting essays.

It is only fair to state that these reasons—and an additional feature possessed by my case, namely, a novel, safe, and easy method of procedure, affording an exceptional opportunity for forming deductions concerning the question of laryngo-fission—are the data which principally prompted the preparation of this paper. It may be well to add that the term subglottic employed by me is taken in its restricted sense as applied to neoplasms attached entirely below the level of the lower cords.

The circumstances attending my relations with the patient whose history and treatment constitute the subject of my remarks, as drawn from my case-book, are substantially as follows:

On March 22, 1882, J. C., a cooper by trade, aged thirty-five, consulted me through the advice of Dr. M. J. Roberts, of New York, as a charity patient, for relief from a difficulty in speech and breathing. The change in his voice was first noticed within the last two years. Difficulty in breathing commenced about a year ago, and has gradually grown worse. There has never been any cough. His general health is excellent.

Examination.—The patient's voice has the character of a raucous whisper, resembling somewhat the sound produced by contact of the hypertrophied ventricular bands of chronic laryngitis in attempts made to phonate distinctly.

A laryngoscopic examination demonstrated the presence of a mass of papillomatous tissue which, during the act of speaking, could be seen covering the anterior margins of the vocal cords. A quiet inspiration made it possible to observe the papilloma occupying the cavity of the larynx, and also showed that the vocal cords and ventricular bands were not involved. I advised removal of the growth through the mouth. An attempt was made to seize it during phonation first with a Cusco forceps, but, not succeeding in this, and fearing that the sound structures might be accidentally injured, I discarded this instrument for Mackenzie's forceps. I succeeded in dragging away several small pieces with the last-named instrument, of about the size of a wheat kernel. Even this instrument, which has yielded such excellent results in the treatment of supra-glottic growths, was eventually abandoned as constituting a menace to the integrity of the neighboring healthy tissues. This liability to injure the peri-laryngeal structures was rendered greater by reason of the irritability of the individual's throat. To add to this difficulty, the tongue of the patient exhibited a most persistent tendency to rise posteriorly, and by this motion partly blocked up the entrance of the fauces. Although I succeeded in removing the lingual obstruction by training the patient to grasp his tongue and then depressing it, I still had to contend with a most tantalizing state of pharyngeal irritability. Sometimes I boldly forced the slender blades of the forceps directly between the contracted cords, and by this manœuvre succeeded in removing the small fragments already referred to.

Mindful of the absolute safety with which my wire écraseur can be operated in the nasal and pharyngeal cavities, I naturally resorted to it in my dilemma. I was, however, doomed to disappointment, for, despite the assiduous employment of several grades of piano-wire and the exercise of great caution in its introduction, the loop was seized and displaced by the violent involuntary contraction of the laryngeal and pharyngeal constrictors. I then had recourse to my chromic-acid applicator, hoping to obtain some of the excellent results already related to you in the history of a patient presented to this society (1884), and which has given good results in the hands of others since the publication of the paper.

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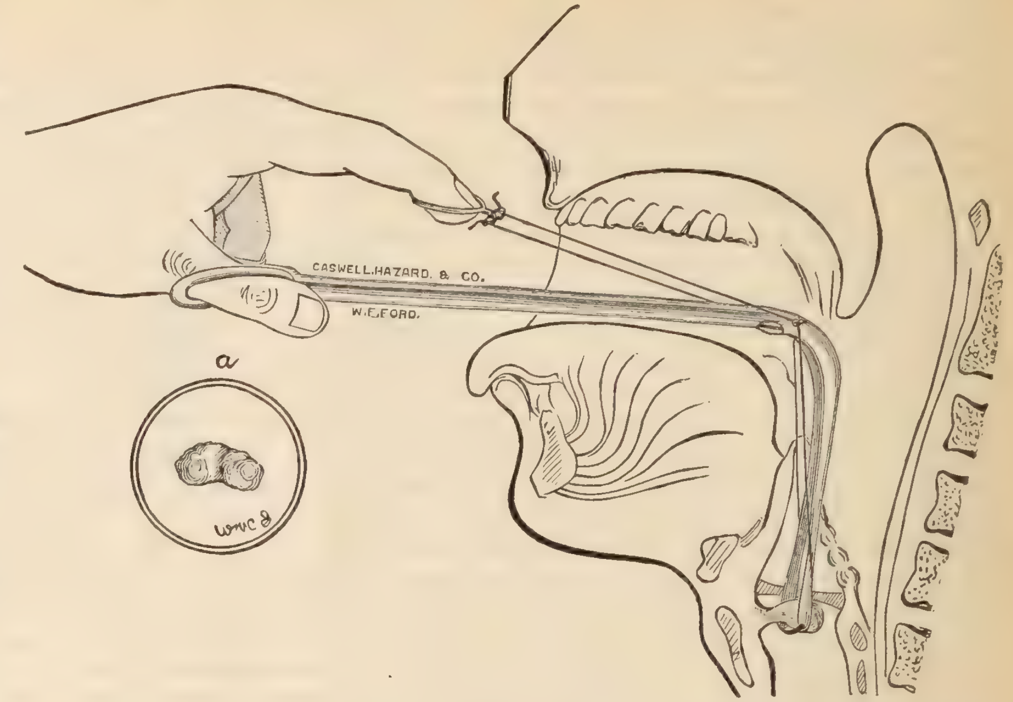
* Read before the American Laryngological Association at its eighth annual congress.

On May 20th I succeeded with great watchfulness in projecting the prepared probe across the interval of greatest irritability directly upon the growth. Blanching of the surface of the growth proved my aim was true. The shedding of the eschar followed in due time. I soon, however, discovered that it was impossible to confine the applications to the surface of the neoplasm because of its intra-laryngeal situation, and therefore abandoned this method, fearing that it might provoke the acute œdema which is apt to follow the action of this caustic when applied to loose folds of mucous membrane.



Further planning was rendered temporarily unnecessary by the disappearance of my patient.

In March, 1884, more than a year after his last visit, the patient consulted me again. His appearance had undergone a marked change in this time. His face was haggard and emaciated. Respiration was labored and clearly inadequate for the requirements of the individual. His efforts to speak were painful to witness, a coarse, muffled whisper or rattling sound being the usual result. He stated that after a hard struggle he had at last been compelled to give up work, and the problem of maintaining his much-dependent family served to increase his general misery. I realized that prompt relief in his dangerous condition was demanded, and consequently proposed to remove the growth by opening the wind-pipe. Willing, however, to grant him every opportunity of escaping this troublesome alternative, I, with his cheerful consent, endeavored to remove the growth which threatened his life while under the influence of a general anæsthetic. Suffocative symptoms, however, occurred before an effort to remove the growth could be attempted.

At this stage of my hitherto ineffective efforts the idea occurred to me that a device which would enable me to introduce a loop of piano-wire in such a manner as to prevent its displacement while within the larynx would enable me to encircle the neoplasm and tear it from its attachment.

Appreciating, in the first place, that an instrument would be needed possessing slender but powerful blades, I selected a stout Mackenzie's forceps, and had it modified to suit the several requirements. The biting portion of the blades was smoothly rounded, to prevent the tissue being seized by its points or sides. The points of the blades were also shaped like a wedge, in order to facilitate their introduction through the vocal cords (see figure), should these be in a state of spasm. Four openings were drilled through the ends of the blades, to serve as guides for the fine piano-wire. The diminutive rings placed at intervals along the arms of the forceps were to conduct the wire and prevent it from coming in contact with the mucous membrane of the throat. In mounting the instrument, the ends of the wire, carried through the eyes and ring-guides, were made to enter a binding screw. The instrument was grasped between the thumb and third finger, the index-finger being left free to manipulate the guide-ring.

On March 7, 1884, I first operated with this improvised laryngeal snare and successfully removed a papilloma (from the cavity of the larynx, in its entirety). My method of procedure was as follows: The forceps, properly armed with a strand of No. 00 wire, was well lubricated with vaseline and guided toward the glottis by means of the laryngoscopic mirror. The persistent reflex spasm occurred as usual, but was for the nonce disregarded, and the point of the forceps boldly projected held upon the powerfully contracted cords. The laryngoscope was now withdrawn and the patient was desired to inspire; as he did not respond to the request, the point of the forceps was firmly pressed by a wedge-like motion directly between the gasping structures and carried far down within the cavity of the larynx. The blades were then separated, a feat requiring the employment of considerable force, and drawn upward over the left lateral wall of the larynx, the inferred point of the growth's attachment.

Just before the forceps left the larynx, a slight resistance in the upward sweep of the instrument was felt, and, the blades being promptly closed, a tearing sensation was conveyed to the fingers. The papilloma came out, clinging to the blades of the instrument. Breathing was at once rendered easier.

The patient, in answer to an inquiry, declared that the presence of the forceps had not been at all painful, a reply which one might expect on contemplating the small size and smoothness of the blades of the instrument.

Laryngoscopic inspection now revealed the presence of another subglottic papilloma, lying below the left vocal cord. A repetition of the procedure resulted in the removal of another papilloma of about the size of the first. The patient spat up a few flakes of blood mixed with mucus. On examining the larynx, I discovered the site of the growth was marked by a circumscribed clot, well within this cavity. The larynx and trachea were perfectly free, and all the familiar outlines were perfect. For the first time in three years the patient broke forth into speech, giving vent, in a loud and clear voice, to expressions of delight. An idea of the size of the growths may be obtained from the figure, in which one is shown graphically reproduced by compass measurements.

May 30, 1884.—Could discern no marks left by the growth in the larynx. Patient has been talking and singing all the week.

The successful removal of these subglottic growths in the manner just described, when thoughtfully reviewed, will be observed to aid in the establishment of several important but as yet unsettled questions. Two points, it seems to me, demand more than a mere mention—namely, the feasibility of extirpating laryngeal tumors by means of an instrument which can be safely and efficiently manipulated without the aid of vision, and even then offer advantages over the many piecemeal methods; and, next, the avoidance of the more serious and troublesome procedure almost universally recommended and employed in these cases—the removal of these growths through an opening in the neck.

Returning to the first proposition, I do not desire to be considered as totally condemning any of the various methods generally employed for the removal of laryngeal growths. These as a rule have found a proper place, yielding good results in the hands of their advocates.

A detailed description of the conditions indicating the employment of the snare-forceps need not detain us here. The multifarious forms and positions assumed by laryngeal growths naturally require increased resources in the choice of instruments and methods. It would, for instance, have been highly inadvisable for me to attempt to remove the exuberant papilloma reported to this society two years ago as cured by my chromic-acid procedure.* In this case the respiratory space was not much larger than a quill, and this was associated with inspiratory spasm of a most serious character. Instrumental interference in this case proved exceedingly hazardous, and its practice was therefore unjustifiable. These cases, however, are reported as infrequent.

The deliberate introduction of the forceps-snare between the vocal cords, while in a state of violent contraction, deep within the cavity of the larynx, demonstrates that the popular impression of the impassability of the glottis in a state of spasm is untenable. The operator must, of course, first satisfy himself that the respiratory slit is sufficient to permit spontaneous recovery from the spasm necessarily provoked. The small amount of space required for this purpose is surprising when we consider the extent of the growth, which nearly filled the larynx in the case just reported.

The question of rendering the glottis viable by the use of cocaine will naturally suggest itself to the minds of a few. While not unmindful of the usefulness of this anæsthetic in cases of irritable throat, I am not the less convinced, from my experience with sub- and supra-glottic growths since the treatment of the case, that it would have proved provokingly inefficient.

The credit of the earliest employment of the snare in laryngoscopic surgery clearly belongs to Dr. Walker, who describes a modified Gooch's cannula, in the London "Lancet" of 1861, by means of which he partially succeeded in removing a laryngeal growth. Gibbs followed with his exposed-wire snare, working on the Wilde principle, by the assiduous employment of which, in conjunction with chloroform anæsthesia, he succeeded in dragging out several laryngeal growths.

Gibbs's conclusion—that the various caustic and cutting methods ranged against his own are to be characterized, in his own words, as "a pecking-away system," liable to generate malignant disease—seems to me rather overdrawn. As regards these and Moura-Bourouillou's spiked snare, I have already shown that the exposed wire can not be properly manipulated in the larynx or lower pharynx, by reason of its liability to become displaced by reflex contraction. In taking this view I am supported by several well-known workers in this operative field who have sought to overcome the defect by the use of rigid rings, which protect the fine wire. The very arguments advanced by the originators of these devices, though intended to be taken as commendatory, show the instruments to be of limited service in the treatment of subglottic laryngeal growths by the natural method, and of little value for the removal of supra-glottic neoplasms. An objection raised by several writers against laryngeal snares is the danger of the growth becoming detached from the loop and dropping into the larynx. The possibility of this accident occurring is most satisfactorily prevented by the snare-forceps, since the neoplasm is tightly grasped by the blades of the instrument.

I shall conclude my remarks with a brief reference to the second proposition — namely, the substitution of the harmless method offered by the snare-forceps for the more serious and troublesome practice of opening the wind-pipe, heretofore largely adopted in these cases. A retrospective glance at the literature of the subject demonstrates the fact that the first impulse generated by the discovery and intelligent employment of the laryngoscope was characterized by a praiseworthy effort to reduce the previously accepted indications for operation through artificial openings to the fewest possible number of cases. Indeed, no single factor appears to have contributed so much to the development of laryngology as a special branch of medicine as the meritorious effort to substitute natural methods of treating laryngeal obstruction for the so-called artificial measures of general surgery.

In pre-laryngoscopic times, intra-laryngeal growths were always removed from without. Immediately after the discovery of the laryngoscope, neoplasms within easy reach were eradicated through the mouth, and the development of laryngoscopic surgery emboldened the laryngologist to remove complicated neoplasms and to ultimately extend his operations into the cavity of the larynx. The last, it is true, is rarely performed, but I believe it will become more popular as our operative resources increase.

In 1884 I presented the history of a patient from whose larynx a difficult papilloma had been successfully removed by my chromic-acid method. I laid particular stress upon the fact that the signal success which followed this operation served to contract the indications for tracheotomy, for in the preliminary examination of this case I had agreed with several consultants that this was the only treatment positively promising any amelioration or cure. The satisfactory results obtained in the treatment of the subglottic papillomata by the natural method just described, it seems to me, must contract the indications for the artificial method to a still greater extent.

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* "A New Method for the Removal of Laryngeal Growths," "N. Y. Med. Jour.," August 23, 1884, p. 206.

Although the foregoing deductions, based upon two cases in my own practice, and the literature of the subject, may appear rather positive, they are nevertheless the outcome of mature and conscientious deliberation, and as such I shall unhesitatingly act upon them in the future; I therefore trust you will, either by the employment of similar measures or any method you may prefer, endeavor, with me, to reduce the frequency of operations on the neck for the removal of the simpler forms of laryngeal obstruction.

DRUGS AND DIGESTION.*

By ROBERT G. ECCLES, M. D.

We smile at the incongruous prescriptions of last century, and wonder how either physicians or patients derived any satisfaction or benefit from them. We sneer at the young graduate who, in the confusion that arises from his new environment, writes orders for gross chemical or physiological incompatibles, and go from his office pondering upon the degeneracy of medical education. We never stop to question the wisdom of ourselves and others pouring into the stomachs of the sick in the most promiscuous manner, without regard to time or circumstances, drugs that inhibit or check the production of life- and health-giving peptone. In all chronic diseases the paramount consideration of every scientific medical man regards the patient's nutrition. Where we can not destroy pathogenic micro-organisms outright, the patient's only hope in the struggle for life lies in the strength of his cells, and their consequent power to triumph over their foes. High above every other consideration at such times is digestion. To interfere with or check it in the least, in many cases, is, then, criminal. When our remedies are incompatible with the gastric juice, the time of taking is likely to be of far more importance than the medicine itself. To weaken our patients by the production of artificial malnutrition gives their merciless diseases the advantage over them, where a little more knowledge would have enabled us to aid the vital forces instead of handicapping them. Important, therefore, as is the knowledge of the effects of drugs upon digestion, it has until the present year (1886) been almost totally neglected. Even in the administration of artificial ferments as aids to digestion the utmost recklessness prevails. Articles utterly valueless, with some of doubtful value, are, on the strength of advertisements and samples, used to the detriment of the sick. Prescriptions have been shown your essayist in various pharmacies in this city and New York for the compounding of which large prices were paid. The ingredients were the very best in the country, but the doctor's ignorance had rendered them totally worthless. First-class pepsin, one grain of which would digest one thousand grains of albumin in an hour, was in one case compounded with ingredients that rendered it utterly inert, and, on actual trial of a repetition of the same, it was found unable to digest a single grain in the same time. This physician probably condemned the pepsin for the bad results, as so many others, under similar circumstances, have done before and since.

Had such prescriptions been written by quacks or unknown practitioners, it would not have been a matter for grave comment. Being the work of men who stand high in the profession, it necessarily wore a more serious aspect.

Your essayist does not for a moment presume to think that laboratory experiments with flasks, bottles, or test-tubes can give exact physiological results. There are cases in which we know that the outcome of the internal use of certain drugs is apparently the very opposite of what might be expected, reasoning exclusively from such data. Let the stomach be the seat of acetic or any other pathological fermentation, and the administration of powerful pepsin inhibitors, in not too large doses, will positively aid and hasten digestion. They exhaust their power in destroying a vicious ferment, and thus enable the otherwise inactive gastric juice to assume its function. Any alkali, alkaline carbonate, corrosive sublimate, carbolic acid, creasote, salicylic acid, or other powerful antagonist of pepsin, will here swing in as an apparent support of Hahnemann's dogma of similars curing similars. As we perceive the causes underlying such seeming contradictions, if we do not rest content with the groundless assumption that the stomach acts in some mysterious non-physical, non-chemical manner, we shall become masters of the situation. Its laws and those of the laboratory are the same, as far as they go together. Our reasoning is at fault when we fail to note the vastly greater complexity involving the one than the other. Whatever inhibits peptonization in the flask will do the same in the stomach, however much other things may mask it, or seem even to give reverse results. The lost power has only led to some unforeseen balancing gain. If we continue to wage war on the stomach's store of pepsin because we blundered into what proved a benefit at one or even two trials, we shall find that we are deceiving ourselves and damaging our patients. To give pepsin inhibitors when all has been gained that can be by compensation, or when no such compensation is possible, can lead only to ill. And yet this is being done daily and hourly in every civilized community upon the globe.

The study of the retarding effects of drugs upon digestion was first earnestly entered into by Dr. Klikovich, a Russian. The only brief notice of his work English-speaking people have had was given in the London "Lancet" on June 19, 1886. The work embodied in this paper was begun in April of the present year. On September 4th the "Lancet" again informed its readers that O. Peterson, of St. Petersburg, had published the results of a similar investigation. These brief notices constitute all that is known upon the matter outside the Czar's dominions. The few drugs mentioned show in their results the bad effects of using dried albumin instead of fresh, and the effects of too large quantities of pepsin. Differences which to them seem to have been inappreciable, and that at the commencement of this work were thought impossible of procurement, have by experience been gained. Plan after plan was tried until the best was discovered. Many of the results were tested by from one to six repeated trials. All would have been so tested if another year could have been devoted to the work. Errors will creep in in spite of the utmost vigilance. For the first three months all the experiments were performed at a temperature of 38° to 40° C. (98° to 100° F.); but, for the purpose of saving time and expense and getting closer results, 49° C. was used. More than half of the old work was confirmed at the new temperature, so that they mutually proved each other. This was a compromise figure between the temperature of the stomach, 40° C., and that found in practice to be the quickest for artificial digestion, 55° C. When five grains of albumin were digested with one tenth of one per cent. of hydrochloric acid in water for one hour, using the same amount of pepsin each time, the following were the amounts undissolved at the temperatures given:

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* Read before the Brooklyn Pathological Society, November 11, 1886.

Degree Centigrade....	40°	44°	49°	55°	60°	66°
Albumin undissolved..	0·30	0·26	0·20	0·14	0·18	0·36

Other per cents. of acid were tried with corresponding results. A glance at the figures shows 55° C. to have the least undissolved albumin left. It would appear from this that the failure of appetite in a patient is not due to the checking of digestion by fever. The products of such digestion, however, no doubt seriously affect the same. There are many kinds of peptone produced in peptic digestion. One of these, called by Meissner parapeptone (Reichert's "Foster's Physiology," page 965), is insoluble in neutral solutions. This is the one most abundantly produced at the higher temperature. Once formed, its further change into true peptone is impossible without the aid of trypsin. Could it be precipitated in the stomach, it would do no harm, since it would be carried through the pyloric orifice into the duodenum, there to complete its metabolism. Not being so precipitated, it finds in the stomach-walls a line of neutrality between the alkaline blood and the acid gastric juice, where it can be thrown down to check all osmosis. Like the dog in the manger, it will not form blood itself nor let that do so which could; consequently the patient must suffer. In cases where the fever does not produce such results, the doctor is kind enough to order it done on the advice of some advertising quack who patronizes his favorite medical journal. Artificially produced peptones of beef, eggs, or milk, prepared at all sorts of temperatures, are poured down the sick man's throat. It is in vain for him to proclaim that his stomach rebels and that he abhors the stuff—down it must go. It is in vain for him to say that his appetite is worse after it. That is reasoned away as due to the disease or to his having derived so much benefit from a former dose. There are peptones and peptones, and the quicker medical men know it the better. In all our digestion of albumin there would be a considerable amount of parapeptone produced but for the chloride of sodium taken with our food. During these experiments it was found that peptones produced in the presence of table salt could not be precipitated by neutralization. This was an important discovery, and showed that the use of this article in our food has hitherto been partly misapprehended. To make alkali and acid for peptic and tryptic digestion it would have been as available, and it would seem even much more available, to take it with the water we drink. But we do not relish drinking salt water as we do eating salt meat or salt bread and butter. Wherever we relish salt, there without it parapeptone would be produced to block digestion. Wherever we do not relish it, there it could not avail in that direction. But salt delays digestion, so that an excess must be guarded against as injurious. When the amount of pepsin is made so small that it will require three hours and a half to digest the albumin used, the presence of one fifth of one per cent. of table salt in the total digestive fluid will delay it to double the time. Four fifths of one per cent. under the same conditions delay to seventeen hours.

Early in this investigation it was deemed advisable to determine whether acids other than lactic and hydrochloric could be used with pepsin to produce peptone. The generally accepted theory being that digestion is a hydrolytic change of the proteids, we should expect to find many other acids capable of producing this result. The following were tried in the varying percentages marked in the first line of the table. The figures opposite the names of the acids represent the amount of albumin remaining undissolved at the end of the trial. The two that were not tried at every strength with the others were considered too doubtful to spend the time upon.

PER CENT. OF ACID.	1	0·8	0·6	0·5	0·3	0·2	0·1
	Grms.	Grms.	Grms.	Grms.	Grms.	Grms.	Grms.
Hydrochloric...	0·80	0·55	0·17	0·10	0·00	0·00	0·30
Phosphoric ...	0·00	0·05	0·12	0·26	0·71	0·93	2·36
Nitro-muriatic..	2·10	1·34	0·31	0·20	0·00	0·21	3·91
Lactic.........	0·35	1·31	1·89	2·16	3·19	3·90	4·15
Tartaric.......	0·39	1·29	1·82	1·96	3·08	3·75	3·93
Hydrobromic...	2·96	2·84	2·24	1·48	0·41	0·16	0·39
Nitric.........	2·27	1·93	1·57	1·41	0·60	0·71	1·89
Citric.........	1·47	2·22	2·50	2·71	3·73	3·92	4·06
Sulphuric......	2·31	2·87	2·98	3·16	3·27	3·34	3·74
Hyperchloric ...	2·65	......	......	3·17	4·79	5·00	......
Acetic	5·00	4·60	3·52	3·19	2·93	3·04	3·11
Hydrocyanic ...	......	......	5·00	5·00	4·87	4·01	......

Hydrochloric acid was afterward tried with a reduced quantity of pepsin, and found to be most efficient at 0·2 per cent. It takes five times as much phosphoric acid to produce the same result as this small quantity of muriatic, while an increased or decreased quantity of muriatic only hinders. A small amount of phosphoric acid added to 0·2 muriatic improves digestion. This is the secret of acid phosphate becoming so popular, and of the efficiency of dilute phosphoric acid in dyspepsia. This, however, is not true of other acids, nor of this one above one per cent. or below one half of one per cent. The next table gives a list of the acids tried. Here digestion was completed in all, and time made the gauge instead of the amount of undissolved albumin. Fifteen centigrammes of absolute acid or its equivalent of dilute acid were added to the fifty grammes of solution. The first nine failed to come out in ten hours.

Acids.

1. Chromic acid	= over 10 hrs.	13. Tannic acid	= 3 hrs.
2. Picric acid	= " " "	14. Benzoic acid	= 2 h. 40 m.
3. Molybdenic acid	= " " "	15. Oxalic acid	= 2 h. 40 m.
4. Sulphuric acid	= " " "	16. Citric acid	= 2 h. 40 m.
5. Thymic acid	= " " "	17. Tartaric acid	= 2 h. 30 m.
6. Hydrobromic a.	= " " "	18. Oleic acid	= 2 h. 20 m.
7. Salicylic acid	= " " "	19. Boric acid	= 2 h. 15 m
8. Pyrogallic acid	= " " "	20. Acetic acid	= 2 h. 15 m.
9. Nitric acid	= " " "	21. Lactic acid	= 2 h. 15 m.
10. Hyperchloric acid	= 3 h. 40 m.	22. Phosphoric acid	= 2 h.
11. Cathartinic acid	= 3 h. 40 m.	23. Arsenious acid	= 2 h.
12. Chrysophanic acid	= 3 h. 40 m.	24. Gallic acid	= 2 h.

The test experiment in this set was over in two hours, so that the last three caused no delay. The last two owe their non-interference in all likelihood to their insolubility. They were practically absent. Benzoic acid did not inhibit as much as it was expected to, for reasons to be mentioned farther on. The nine that caused a delay of over ten hours were tried again after reducing to one third the former strength. This made them one part in a thousand of the solution. The next table gives the new results with the five centigrammes. The test time was again two hours.

Acids.

1. Chromic acid	= over 10 hrs.	6. Hydrobromic a.	= 3 h. 50 m.
2. Picric acid	= " " "	7. Salicylic acid	= 3 h. 20 m.
3. Molybdenic acid	= " " "	8. Nitric acid	= 3 h. 20 m.
4. Thymic acid	= 7 h. 40 m.	9. Carbolic acid	= 3 h. 10 m.
5. Sulphuric acid	= 5 h. 10 m.	10. Pyrogallic acid	= 2 h. 5 m.

As three again went over ten hours, at the next trial they were reduced again, one centigramme only being used, or one part in five thousand. The test time, by increasing the pepsin double, was reduced to one hour. Chromic acid came out in four hours and forty minutes, picric in four hours and a half, and molybdenic about the same. To make their effects non-appreciable would require their dilution to not less than one part in thirty thousand. Picric acid in contact with ground albumin over night causes a very marked shrinkage in the volume, so that it appears as if the larger bulk of it had been digested without pepsin. The following alkaloids and their salts were next tried. The test time was again two hours. Three parts in one thousand were used, or fifteen centigrammes in fifty grammes. The first on the list, ferrocyanide of quinine, was completely decomposed at the expense of the acid, and, although 0·4 per cent., or double the usual quantity, was used, its long delay was probably due to this. At the end of the experiment, considerable Prussian blue had taken the place of the now dissolved chloride of quinine.

Alkaloids and their Salts.

1. Ferrocyanide of quinine	= 5 h. 30 m.
2. Citrate of iron and strychnine	= 5 h. 20 m.
3. " " " " quinine	= 5 h. 10 m.
4. Sulphate of cinchonidine	= 4 h. 30 m.
5. " " cinchonine	= 4 h. 20 m.
6. " " quinidine	= 4 h. 20 m.
7. " " quinine	= 4 h. 10 m.
8. Bisulphate of quinine	= 4 h.
9. Sulphate of strychnine	= 4 h.
10. " " morphine	= 3 h. 40 m.
11. Tannate of quinine	= 3 h. 20 m.
12. Salicylate of quinine	= 3 h. 20 m.
13. " " cinchonidine	= 3 h. 10 m.
14. Chloride of quinine	= 3 h. 05 m.
15. Bromide of quinine	= 3 h.
16. Sulphate of atropine	= 3 h.
17. Hydrochloride of cocaine	= 2 h. 50 m.
18. Chloride of morphine	= 2 h. 45 m.
19. Bromide of caffeine	= 2 h. 40 m.
20. Veratrine	= 2 h. 40 m.
21. Strychnine	= 2 h. 30 m.
22. Aconitine	= 2 h. 20 m.
23. Brucine	= 2 h. 20 m.
24. Morphine	= 2 h. 15 m.
25. Acetate of strychnine	= 2 h. 15 m.
26. Chloride of pilocarpine	= 2 h. 15 m.
27. Acetate of morphine	= 2 h. 05 m.
28. Codeine	= 2 h.

The last one coming out evenly with the test, showed that its presence had not retarded any. It was again tried in double the proportion—*i. e.*, three centigrammes in fifty grammes. This time it did not come out for two hours and forty minutes.

(To be concluded.)

OBSERVATIONS ON
A RECENT EPIDEMIC OF MEASLES.

By THOMAS D. SWIFT, M. D.,
VISITING PHYSICIAN TO THE DEMILT DISPENSARY.

During July, 1886, fifty-six cases of measles were treated in the out-department of the Demilt Dispensary (South District), in twenty-nine of which I recorded the histories. These cases differed from those of previous epidemics in some striking particulars.

As to the time elapsing between the beginning of the sickness and the appearance of the eruption—*i. e.*, duration of the stage of invasion—careful questioning resulted as follows:

The rash appeared on the 1st day (within 24 hrs.) in 4
" " " " 2d " " 4
" " " " 3d " " 11
" " " " 4th " " 1
" " " " 5th " " 1
" " " " 6th " " 1
Not accurately ascertained " 7

Total.................................. 29

This accords with Meigs and Pepper's observations, as in one half of the ascertained cases the rash appeared on the third day—not long after forty-eight hours. Other authorities name the fourth as the day on which to expect the eruption. Many previously noted cases of mine give the third day.

In the next place, this recent epidemic has been characterized by a much greater average degree of sickness than has obtained for several years past. The children have been prostrated and difficult to feed, and the parents much alarmed. The eruption has been profuse—generally confluent on the face—the cough very severe, and the throat very sore. I speak, of course, of uncomplicated cases. Bronchitis, evidenced by the presence of râles in the lungs, has been uniformly present and quite extensive. This, I think, should be regarded as much a part of the disease as the coryza and pharyngitis are, and not a complication. In several of the cases the temperature reached 104° F., and in very nearly all was as high as 103°. This, I think, is an average of two degrees higher than the general run. The fluctuations in temperature, spoken of as characteristic of the disease, were sufficiently noticeable to be spoken of by the parents, and to lead me to think of the presence of a malarial element which time has disproved.

As to complications, they have been neither unusually frequent nor severe. Pneumonia occurred in three cases, ending fatally in one. Intestinal catarrh followed three cases, and tuberculosis of the lungs was developed in one child.

In respect to the other phenomena of the disease, there was nothing out of the usual order. The eruption began to fade after three days usually, and left coppery or dusky stains for several days. The cough persisted for about a week, declining slowly. Drowsiness was observed at the onset in most cases. The rash was distinctly pale rose-colored, and in a few cases yellowish or salmon-colored.

But the feature which has attracted my special attention is the constancy with which enlargement of the post-cervical lymphatic glands has been present in twenty-four of the twenty-nine cases. In two it was not present, and in three unrecorded. This enlargement is spoken of as being characteristic of Rötheln, or German measles, and of great diagnostic value. (See Meigs and Pepper's "Diseases of Children.") I have habitually looked for it during the past three years, and until this year's epidemic have scarcely ever seen it in true measles. The number of glands found enlarged, both sides being affected, varied from two to eight. The enlargement was considerable, from one fourth to three fourths of an inch in length, and pain on movement, and tenderness were present. In one case the axillary glands enlarged and suppurated, but those in the neck always disappeared without suppuration. This phenomenon might readily lead to error in diagnosis, in a case of measles with slight grade of fever and of naso-pharyngeal inflammation, and the eruption coming within twenty-four hours. Such error I made in two cases, and was compelled by subsequent events to change my diagnosis from that of German measles to true measles.

A partial explanation of this gland symptom might be found in the fact that the degree of throat inflammation was generally so much greater than usual. The glands behind the angle of the jaw and in the neck enlarge in scarlatina, diphtheria, and follicular amygdalitis in children. This would not, however, cover the ground, for the mild cases were affected, and in previous epidemics the severe cases were not.

These, then, are the points which have seemed to me to be worthy of notice—the general severity of the sickness, the higher temperature range, the prominence and invariable presence of bronchitis, and the peculiar glandular implication.

As to treatment, I have uniformly given a prescription containing syr. ipecac., tr. opii camphorat., and liq. ammon. acetat., in quantities varying with the age, this being designed to relieve the cough and promote expectoration, and to produce diaphoresis. In addition, I have, as far as possible, kept the children in bed and in darkened rooms, have ordered warm baths, and have urged the nourishment to a high point.

Correspondence.

LETTER FROM VIENNA.

The Opening of the New Anatomical Institute.—The Old Anatomists of Vienna.—Professor Breisky's First Lecture at the General Hospital.—The Imperial-Royal Society of Physicians.—The Doctoren-Collegium.—The Cholera.

VIENNA, *November 1, 1886.*

THE winter session of the Medical Faculty began this year with the inauguration of the new Anatomical Institute. It is well known that Vienna, with its unrivaled General Hospital, has never until now possessed the necessary arrangements for the study of anatomy, the accommodations set apart for this purpose having been too small to permit all the students to pursue the subject comfortably, and at the same time quite insanitary. The celebrated anatomist, Ex-professor Joseph Hyrtl—who had pleaded for a long time for the creation of a worthy home for the fundamental branch of all medicine, and who said, among other things, that, whereas the medical faculties in the little German towns that had no more inhabitants than the Vienna General Hospital had beds built palaces for the study of anatomy, the Vienna Medical Faculty located its dissecting-rooms in old and unwholesome corners upon which God's sun never shone—did not succeed in his various endeavors; it was not until recently, about a year and a half ago, that the Austrian Government decided to furnish the necessary means for the building of a suitable anatomical institution—one that is indeed unique of its kind.

I will presently give a short description of the arrangements of the institution, but first I wish to give a short extract from the inaugural address delivered at its opening by Professor von Langer, relating to the history of anatomy in Vienna. Among other things, the speaker said: "The first Vienna anatomist was the ingenious Joseph Barth, his pupils and assistants being Joseph Ehrenritter, Adam Schmidt, and Rudolphus Petter. Barth, being also a draughtsman and engraver, had cultivated artistic anatomy, and was, too, the discoverer of that precious antique known as the Ilioneus, one of the adornments of the Munich Glyptothek. Ehrenritter and Schmidt were famous dissectors of the nervous system; the former discovered the upper ganglion jugulare glossopharyngei, and the latter described and named the lumbar plexus. In accordance with an imperial mandate, Barth and his pupils began to occupy themselves with ophthalmology, and Barth founded the first ophthalmological school in Austria. Another pupil of Barth's became his famous successor as a teacher of anatomy and physiology. It was George Prochaska, who first acted as an instructor and investigator at Prague, and then at Vienna until 1819. He acquired great note in the physiology of the nervous system, and was the predecessor of Charles Bell and Johann Müller. Prochaska was the first to distinguish two sorts of nerve-fibers, the one conducting to the periphery and the other to the center, while Bell succeeded in finding these two sorts of nerves anatomically separated in the spinal nerve-roots. He also described what are now generally known under the name of "reflex acts." Professor von Langer remarked that he wished to emphasize that sentence pronounced by Prochaska, which at the time was received with astonishment and even with disgust: That the forces known under the name of vital force were no special, no particular forces, but only general, natural forces. Prochaska was also an eager investigator in anatomy, and gave special attention to the blood-vascular system—to the so-called capillaries—with particular reference to the process of nutrition. He was thus enabled to affirm that cartilage did not become bone by a metamorphosis of its substance, but that it was only a transitory formation on which the bone built itself up gradually. Precious anatomical specimens and a collection of microscopical objects handed down from Prochaska were now in the Vienna Anatomical Museum. It was also he to whom was due the separation of anatomical from physiological teaching in Austria, both branches having been intrusted to one person until his time.

Professor von Langer then mentioned the name of Berres, who, after a long and quite fruitless scientific interval, charged himself with the teaching of anatomy in Vienna in 1830, and was closely occupied with histology, to which absorbing attention then began to be given. The speaker had pursued his anatomical studies under the direction of Berres and his colleague, Julius Czermak, the professor of physiology, and he thought of them with the deepest feeling of thankfulness, as well as of his colleague, Voigt, the author of the well-known treatise on the peripheral division of the cerebro-spinal nerves.

In 1845 Joseph Hyrtl was appointed professor of anatomy at Vienna, and it was he who introduced lectures on topographical and applied anatomy. As Professor von Langer remarked, it would be quite useless to mention the numerous treatises and works of this famous anatomist, as they are known and appreciated by the whole world. The speaker then turned to the students and directed their attention to the value of anatomical study to the practical physician, beginning with the words: "*Clavis et clavus medicinæ*," the key and helm of medicine, as anatomy is called.

The new Anatomical Institute has to serve for two chairs of anatomy, that of Professor von Langer and that of Professor Toldt. Each lecture room is capable of holding three hundred students, the seats being arranged as in an amphitheatre. In the first story is the library of the two professors, and on either side of these there are working-rooms and writing-rooms for the professors. The museum is in the second story. Each of the two great wings contains two dissecting-rooms, each room being furnished with ten tables with marble tops, so that there are forty tables in all. Behind the lecture-room is the boiler-house, with three boilers for heating the building, and one for the electric lighting. Near by is the engine-house, with two engines for propelling the dynamo-machines for the production of the electric light, with which all the lecture-rooms and work-rooms are furnished. Each dissecting-room has three arc-lamps of 3,000 candle-power, and each lecture-room two arc-lamps of 2,000 candle-power; the other rooms are furnished with incandescent lamps. The building is also provided with eighty-eight water-basins and with hose-pipes of large size for cleansing the walls and the floors. In the cellar the cadavers are kept, placed on marble slabs (on ice in the summer), until they are wanted for dissecting purposes; they are carried up to the dissecting-rooms by means of elevators. On the frieze of the building is the inscription "Built in the reign of Francis Joseph the First, MDCCCLXXXV." Several high dignitaries of the city assisted at the inauguration, which took place on the 11th of October; among them the Minister of Education, who addressed the academical youth.

Professor von Breisky gave his first lecture in the General Hospital on the 18th of October. In his introductory remarks he spoke of two great Vienna gynæcologists, Boër and Semmelweiss. Toward the close of the last century Boër drew attention to the efficiency of the natural forces in uncomplicated cases of parturition, and reduced artificial interference to only what was necessary. It was, indeed, Boër's "natural midwifery," as he called it, continued Professor von Breisky, that laid the foundation on which observation of normal and pathological cases of labor could alone lead to inferences free from objection. Boër had given a clear idea of when to interfere and when not to interfere. As for Semmelweiss, it was he who, in the middle of the present century, presented us with an ingenious doctrine of the nature and prevention of puerperal fever, for which science was much indebted to him. Professor von Breisky then spoke at length of Semmelweiss's merits and of the circumstances under which he had arrived at his immortal discoveries; and drew a parallel between him and Lister, entering upon the subject of antisepsis in private as well as in hospital practice. The lecturer was received with enthusiastic cheers by the students.

The Imperial-Royal Society of Physicians of Vienna held its first meeting for the season on the 15th of October. The president, Professor von Bamberger, greeted the assembly with cheerful words, and expressed his regret that the honorary president, Professor von Arlt, was suffering so much from disease; but added that the famous old oculist was bearing his trouble with true philosophical resignation and devotion. As you may know, Professor von Arlt has had his leg amputated without the use of an anæsthetic—a real piece of heroism, indeed, in so weak a man. At this meeting Docent Dr. Freud read a paper on "Hysteria in the Male," and the subject was discussed by Professor von Bamberger, Professor Meynert, Professor Leidesdorf, and Professor Rosenthal.

The Vienna *medicinisches Doctoren-Collegium* was opened on the 11th of October with a lecture by Professor Weichselbaum "On the Ætiology of Cholera." The scientific committee had resolved on establishing a series of "cholera evenings," the subject being now one of lively interest for Austria. The physicians of Vienna are invited to take part in discussions on the ætiology, prevention, and treatment of cholera. The discussions are to be introduced by lectures on the most important features of the subject. In his introductory lecture, Professor Weichselbaum kept quite to the contagionist standpoint of Koch, and declared that there was no doubt about the pathogenetic action of the comma bacillus.

The first case of cholera occurred in Vienna on the 17th of October, but fortunately the patient was a foreigner who had just arrived from Buda-Pest. On his way hither he had felt ill, and he died soon after his transfer from his hotel to one of the hospitals. Professor Weichselbaum made an autopsy in this case, and diagnosticated Asiatic cholera. Thus far this is the only case that has occurred in Vienna. The disease is still raging in Hungary. At Szegedin there had occurred, up to the 13th of October, the ninth day after the outbreak in that city, 284 cases, with 124 deaths. At Buda-Pest the disease has shown little abatement. In Trieste the increase from the 14th to the 21st of October was 70 cases, with 39 deaths. The whole number of those attacked since the 7th of June is 859, of whom 271 have recovered and 56 are still under treatment. Sporadic cases have occurred in the province of Istria, in the territory of Capo d'Istria, as well as in the towns of Rovigno and Pola. In these two towns there have occurred, since the 18th of September, 18 and 24 cases, with 17 and 19 deaths. The other districts of Istria are free from the disease. The whole number of those attacked in Istria since the 13th of July is 662, with 368 deaths.

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TAPPING THE LIVER FOR BLOOD.

At the recent meeting of the British Medical Association, Dr. George Harley, of London, read before the Section in Surgery a paper introductory to a discussion on the "Surgery of the Liver." The paper is now published in the "British Medical Journal," and it deals with two therapeutical procedures proposed by the author in the treatment of engorgement and chronic congestive hypertrophy of the liver. One of these procedures—and to that one we shall for the present confine our attention—Dr. Harley terms "hepatic phlebotomy," by which he means tapping the substance of the liver with a trocar for the purpose of abstracting blood directly from it. It is to be remarked at the outset that the term phlebotomy seems somewhat inaccurately applied in this instance, for, although it may be applicable considered only as an etymon (since veins are doubtless cut in the operation), Dr. Harley makes a point of the improbability of so small a cannula as he advises entering a vessel large enough to involve any danger of a considerable amount of air finding its way into the general circulation. From the description which he gives of his method of making the puncture it is evident, indeed, that he seeks only to open vessels enough, whether arteries, veins, or capillaries, to furnish the requisite stream of blood. Manifestly, therefore, the procedure is not a phlebotomy in the proper sense of the term.

It matters little, however, what it is called; what we are most interested in knowing concerning it relates to whether or not it has appreciable advantages, and to whether or not it is reasonably free from risk. As to the first of these points, Dr. Harley is at some pains to demonstrate the impossibility of directly abstracting blood from the liver by means of leeches or cups, and the inferiority, if anything, of leeching and cupping over the region of the liver to the abstraction of the same amount of blood from a vein in the arm. Theoretically, then, tapping the substance of the liver for blood may be expected to afford decided advantages as a means of reducing hepatic engorgement. The author says that he has long entertained this idea, and that he has been seeking for an opportunity to put it to the test, but that never until two years ago was he able to get the necessary consent of the family physician together with that of the patient and his family. In September, 1884, however, the long-looked-for opportunity came; Dr. Dunbar Walker asked Dr. Harley to see with him a lady who had been attacked with hepatitis a month before, the liver being found greatly enlarged and indurated, the lower part of the body dropsical, and the peritoneal cavity distended with fluid. Tapping the abdomen, together with the use of aperients, was followed by no material advantage, and, after a fortnight's treatment, the liver was undiminished in size, and the dropsical symptoms were as bad as ever. When Dr. Harley was called in, he thought the patient was in a perfectly hopeless state, and he proposed his operation as the only likely means of saving her life. The remaining history of the case we will give in Dr. Harley's own words, as follows:

"Dr. Walker agreed with me that, although the withdrawal of blood directly from the engorged liver appeared to be but a forlorn hope of saving the life of the sufferer, as it might possibly mitigate some of the most distressing symptoms arising from the virulence of the inflammation of the organ, it would be well to try it. On our proposing the operation to the husband and patient, it was declined. A day or two afterward, however, when the symptoms had assumed a still more aggravated form, and the hopelessness of the case had become apparent even to their inexperienced eyes, they assented to make a trial of the operation, and it was accordingly had recourse to in the following wise:

"Dr. Walker having rendered the lady insensible with the A. C. E. mixture, I pierced the upper part of the liver from right to left with an eight-inch-long trocar of the diameter of between a No. 2 and No. 3 sized English catheter. The normal liver being at least ten inches broad, in an average-sized woman, and this liver being greatly enlarged—several inches, both laterally and perpendicularly—I felt perfectly safe in running the eight-inch-long trocar up to its very hilt. This was done in the hope that during its transverse penetration of the organ it might wound one or more vessels—veins or arteries, it did not matter which—of sufficient caliber to yield a free stream of blood. In this hope we were in nowise disappointed; for, on gradually withdrawing the end of the cannula, about an inch or two, so as to allow of the blood oozing from the wounded vessels to enter the cannula from the canal left in the liver-tissue by the receding instrument, a stream of blood immediately issued from its free orifice. The stream in this case was far larger than I had ever witnessed flow from the healthy liver of any dog or other animal I had operated upon in a similar way. This I, of course, attribute to the engorged state of the liver's vessels on account of the hepatitis.

"Twenty ounces of hepatic blood were abstracted without the slightest deleterious result. Quite the contrary, indeed. For, as may be gathered by the following words in Dr. Walker's report, the operation had a salutary effect, far beyond our expectations. Dr. Walker's own words are: 'From the day of the operation the liver became gradually reduced in size. With the aid of tapping and the administration of the resin of copaiba, the ascites and general anasarca disappeared, and by the beginning of December (that is to say, in two months) the patient was already able to walk out.' As a supplement to this, I may add that, exactly eleven weeks after the blood had been abstracted from her liver, the patient walked from her own house at Notting Hill to mine in Harley Street, which is a distance of nearly three miles, and expressed herself as feeling 'perfectly well, only a little weak and stiff from the walk.' All the dropsy had by this time disappeared. I could detect no fluid in the abdomen; while, from the hepatic dullness in the right nipple perpendicular, being just above four and a half inches, the liver might, I think, be said to have regained its normal dimensions.

"P. S.—I ought to have mentioned that, after the operation was finished and the cannula withdrawn, a two-inch-square piece of sticking-plaster was put over the seat of the abdominal puncture, and the abdomen tightly bandaged (with a four-inch-deep cotton roller), in order to bring the abdominal parietes into close contact with the wound in the liver's capsule, so to avoid all possibility of hæmorrhage into the peritoneal cavity, should the natural resilience of the hepatic tissue not suffice to close the opening; a thing very unlikely to occur, unless the operation were bunglingly performed, and some large blood-vessel wounded, on account of the trocar not having been properly inserted."

So far as it goes, this clinical history is certainly striking, sustaining the author's views both as to the innocuousness and as to the advantages of the direct abstraction of blood from the substance of the liver in cases of engorgement. Indiscriminate stabbing of the liver is, of course, to be deprecated, and, for the present at least, Dr. Harley's procedure should be resorted to only under a clear diagnosis and in cases where an adequate trial of ordinary measures has proved unavailing; but there can be little doubt that the experiment will before long have been repeated often enough, and under sufficiently satisfactory circumstances, to establish the precise extent to which it may be looked upon as a legitimate addition to our therapeutical resources.

MINOR PARAGRAPHS.

HYSTERORRHAPHY.

At a recent meeting of the Obstetrical Society of Philadelphia, for an account of the proceedings of which we are indebted to the secretary, Dr. W. H. H. Githens, Dr. Howard A. Kelly read a paper in which, under the name of hysterorrhaphy, he advocated an operation which, he thought, was to be preferred to shortening of the round ligaments in certain cases of retroversion or retroflexion of the uterus. The speaker stated that he first did this operation on the 25th of April, 1885, in the case of a patient who had been under his care for nearly three years, and previously under that of several other physicians. The uterus was acutely retroflexed, the body large and soft, and the fundus lying below the level of the cervix. Months of rest in bed, accompanied with careful local treatment, failed to overcome the flexion even temporarily. A year before, the right ovary had been removed by the vagina. The left ovary and oviduct were now removed, and, on raising the uterus, the operator felt a sharp band of cicatricial tissue half encircling the organ at the angle of flexion, which made it evident that any attempt to correct the condition from without would prove futile. Silk sutures were passed through the left horn of the uterus, and the body of the organ was slung from a point on the anterior abdominal wall about an inch and a half above the pubes, to the left of the incision. The suspensory sutures were passed between two ligatures encircling the horn at the base of the pedicle, to avoid the dangers of their tearing out and of bleeding. The uterus, thus suspended, remained in place for a year, when it was again dragged down by a distended state of the right oviduct.

Dr. Kelly thinks it would be well in future operations to suspend the uterus by both cornua. While in most cases, he added, the trouble would be found to be of long standing and involving the appendages in chronic disease incurable except by their removal, in some instances it would be well to try the effect on them of the drainage to be secured by raising the body of the uterus, and with it the appendages. The operation was to be urged in cases where the uterus had long been retroflexed and infiltrated, and was incapable of maintaining its proper attitude after the removal of the appendages. If there were adhesions, he thought they should be carefully severed.

A MEDICAL DRAMATIST.

We have received a copy of a dainty little volume that reflects great credit on the publishers, Messrs. Cupples, Upham, & Co., of Boston, the author of which is Dr. Frank Donaldson, Jr., of Baltimore. The volume is entitled "Two Comedies: An Ill Wind; An Abject Apology." Dr. Donaldson is already favorably known to the profession as a contributor to medical literature, and we are glad that so competent a writer has essayed, in, we presume, his first notable effort in general literature, so difficult a branch as dramatic writing. We think the two comedies show evidence enough of dramatic capacity to encourage the author to further work in the same field. They are not free from artistic defects, and we should hardly expect them to "draw" if put upon the stage; but their representation, we take it, was not what the author had in view, but simply the praiseworthy purpose of contributing to our still too scanty stock of entertaining and unobjectionable reading. Viewed in this light, Dr. Donaldson's achievement is highly satisfactory.

THE NEW SURGEON-GENERAL OF THE ARMY.

In our last issue we briefly announced the appointment of Lieutenant-Colonel John Moore, Assistant Medical Purveyor, to be Surgeon-General of the army, and this week we publish the official announcement of the appointment. Surgeon-General Moore is a native of Indiana, from which State he entered the medical corps of the army in 1853. His first active service was at Fort Meade, Florida, where he relieved Dr. W. A. Hammond, during the second Seminole war. He attained to the rank of major in 1862, and was brevetted lieutenant-colonel in 1864, for gallant and meritorious service during the Atlanta campaign, and the following year, having served as a medical director, he was brevetted colonel, for faithful and meritorious service during the war. For some time past he has been Assistant Medical Purveyor and Acting Medical Storekeeper at San Francisco. He was the fifth on the list of lieutenant colonels of the medical corps in the line of promotion.

ITEMS, ETC.

Infectious Diseases in New York.—We are indebted to the Sanitary Bureau of the Fourth Division of the Health Department for the following statement of cases and deaths reported during the two weeks ending November 23, 1886:

DISEASES.	Week ending Nov. 16.		Week ending Nov. 23.	
	Cases.	Deaths.	Cases.	Deaths.
Typhus	1	0	0	0
Typhoid fever	23	9	33	7
Scarlet fever	26	3	27	4
Cerebro-spinal meningitis	7	7	6	6
Measles	262	46	318	38
Diphtheria	124	49	101	43
Small-pox	0	0	1	0

Diphtheria in Indiana.—A press dispatch states that a malignant type of the disease has been raging in Logansport for several weeks, and that it is traveling up the valley of the Wabash, having already appeared in Rochester and Rich Valley. Fully one hundred children, it is stated, have already died of the disease.

Diphtheria in Michigan.—It is reported that the disease is epidemic in the town of Ishpeming, and that public gatherings have been prohibited and the schools and churches closed.

The Medical Society of the County of New York.—At the adjourned annual meeting, held on the 22d inst., the following-named members were appointed to serve on committees:

Dr. E. Darwin Hudson, Jr., Dr. Alexander S. Hunter, Dr. Charles E. Hackley, Dr. E. A. Maxwell, and Dr. Edwin F. Ward on the Committee on Ethics; Dr. Alexander Hadden, Dr. John C. Peters, Dr. Cyrus Edson, Dr. D. B. St. John Roosa, and Dr. J. H. Billings on the Committee on Hygiene; Dr. Joseph D. Bryant, Dr. A. B. Judson, and Dr. F. A. Castle on the Committee on Prize Essays; and Dr. P. A. Morrow and Dr. H. G. Piffard on the Auditing Committee.

In accordance with a recommendation by the Comitia Minora, a member was expelled by a unanimous vote. The charges brought against him are understood to have been the result of an editorial article in the Philadelphia "Medical News."

It was resolved to continue the publication of the society's "Medical Directory" another year, the book to be edited by the Comitia Minora.

Dr. Joseph D. Bryant read a memoir of the late Dr. Gaspar Griswold.

Dr. Lefferts's Lectures on Diseases of the Throat and Nose.—The eighth and ninth lectures of the current course at the College of Physicians and Surgeons will be given on Tuesday, November 30th, and Tuesday, December 7th, at 2 P. M. The subjects of the two lectures are "Simple Chronic Catarrhal Laryngitis; Chronic Glandular Laryngitis; Phlebectasis Laryngea; Trachoma of the Vocal Bands; and Subglottic Chronic Laryngitis." Laryngoscopic demonstrations will be given, and the therapeutics of acute and chronic catarrhal inflammation of the larynx in general will be illustrated, all the usual forms of apparatus being shown and described. Copies of the "Pharmacopœia for Diseases of the Throat and Nose," used in the clinic, will be distributed among the students. Demonstrations will be given of the treatment of chronic laryngitis by means of the compressed-air spray, the laryngeal brush, and the powder insufflator.

The University of Pennsylvania.—An association of the alumni of this institution was recently organized, and on Tuesday evening the event was celebrated by a dinner at Delmonico's, at which the provost, Dr. William Pepper, Dr. Leidy, and a number of the graduates of the medical department were present. It is gratifying to know that members of our profession are taking a prominent part in the organization.

The University of Virginia.—We regret to learn that the medical department of the university has lately met with a serious loss by reason of the breaking out of a fire in one of the lecture-rooms. The destruction is said to have been confined chiefly to the anatomical drawings.

The Medical Department of Dartmouth College held its annual commencement exercises last Tuesday, when the degree of M. D. was conferred on nineteen candidates.

Medicine and the Blue Laws of Boston.—The enforcement of the Puritanical blue laws on Sunday last caused a general closing of the apothecary-shops in Boston. Many of the apothecaries hung inscriptions, which they considered appropriate to the occasion, in their windows, and one is said to have placed in his window a bottle of cholera mixture labeled "Wait till Monday."

A Lesson in Obstetrics.—A colored physician in one of the Southern States, having a forceps case and being unable to apply the instrument, sent for a white doctor, who in about ten minutes extracted the child. Following him to the door, the colored doctor handed him a five-dollar bill, saying that he wanted to pay for his lesson in obstetrics.

Female Medical Students in Europe.—It is stated that there are twenty-nine women studying medicine at the University of Zurich, that in London the female students number forty-eight, and that of the four thousand students of medicine in Paris, one hundred and three are women. Eighteen women are said to have been graduated as doctors of medicine in Paris within the last seven years.

The International Health Congress, to be held in Vienna in September, 1887, promises to be successful. The hereditary Prince of Austria, Crown-Prince Rudolphus, has consented to act as the patron of the congress, and the Chief of the Cabinet, Count Traffe, has been designated as honorary president. The committee, with Hofrath Schneider at its head, is working energetically to make the congress successful.

A Statue of John Hunter.—"As our readers are aware," says the "Lancet," "the site of John Hunter's house at Earl's Court has recently been cleared for the erection of villas, and will in future be known as Barkston Gardens. A correspondent reports that it is now the great wish of the local medical and other residents that a statue of the great anatomist should grace the center of the proposed gardens, which will mark almost the identical spot on which the house so lately stood. Otherwise, all trace of John Hunter's connection with Earl's Court must for ever be locally obliterated. The owner of the property is in favor of the scheme, and a suitable appeal for funds will shortly be made to the public—an appeal which will, no doubt, fully realize sufficient to properly carry out the object in view."

Splenectomy.—Last Sunday Dr. J. R. Nilsen removed a floating and hypertrophied spleen at the New York Post-graduate Medical School and Hospital. On Wednesday our information was that the patient was doing well.

Army Intelligence.—*Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from November 14, 1886, to November 20, 1886:*

GREENLEAF, C. R., Major and Surgeon. Relieved from duty at Columbus Barracks, Ohio, and ordered for duty as attending surgeon at Headquarters of the Division of the Missouri and examiner of recruits at Chicago, Ill. S. O. 268, A. G. O., November 17, 1886.

TILTON, HENRY R., Major and Surgeon. Relieved from the duties of attending surgeon at Headquarters of the Division of the Pacific and Department of California. S. O. 96, Division of the Pacific, November 9, 1886.

WATERS, W. E., Major and Surgeon. Ordered from Fort Spokane to Vancouver Barracks, Washington Territory, for duty at that post. S. O. 197, Department of the Columbia, November 8, 1886.

Par. 8, S. O. 257, A. G. O., November 4, 1886, is so amended as to direct V. B. HUBBARD, Major and Surgeon, to report in person to the commanding officer, Columbus Barracks, Ohio, for duty. Par. 3, S. O. 268, A. G. O., November 17, 1886.

CALDWELL, D. G., Major and Surgeon. Granted leave of absence for one month, with permission to apply for twenty days' extension. S. O. 150, Department of the Platte, November 12, 1886.

SMART, CHARLES, Major and Surgeon. Granted leave of absence for one month. S. O. 265, A. G. O., November 13, 1886.

MACAULEY, C. N. B., First Lieutenant and Assistant Surgeon. Granted leave of absence for twenty days. S. O. 118, Department of Dakota, November 8, 1886.

CROSBY, W. D., First Lieutenant and Assistant Surgeon. Ordered from Fort McDowell, Arizona Territory, to Fort Bowie, Arizona Territory. S. O. 110, Department of Arizona, October 29, 1886.

Morris, E. R., First Lieutenant and Assistant Surgeon. Ordered from Fort Bayard, New Mexico, to Fort Thomas, Arizona Territory. S. O. 110, Department of Arizona, October 29, 1886.

Appointments.

Moore, John, Lieutenant Colonel and Assistant Medical Purveyor. To be Surgeon-General of the army. November 18, 1886.

Ball, Robert R. To be Assistant Surgeon with the rank of First Lieutenant. November 19, 1886.

Promotions.

Baily, Joseph C., Major and Surgeon. To be Assistant Medical Purveyor with the rank of Lieutenant-Colonel. November 18, 1886.

Heizmann, Charles L., Captain and Assistant Surgeon. To be Surgeon with the rank of Major. November 18, 1886.

Naval Intelligence.—*Official List of Changes in the Medical Corps of the United States Navy for the week ended November 20, 1886.*

Nash, Francis S., Passed Assistant Surgeon. Ordered to special duty at the Smithsonian Institution. November 26, 1886.

Rhoades, A. C., Medical Inspector. Ordered to special duty attending officers and families, New York city.

Society Meetings for the Coming Week:

Tuesday, *November 30th:* Boston Society of Medical Sciences (private).

Wednesday, *December 1st:* Harlem Medical Association of the City of New York; Medical Society of the County of Richmond, N. Y. (Stapleton); Penobscot, Me., County Medical Society (Bangor); Bridgeport, Conn., Medical Association; Philadelphia County Medical Society.

Thursday, *December 2d:* New York Academy of Medicine; Society of Physicians of the Village of Canandaigua, N. Y.; Boston Medico-psychological Association; Obstetrical Society of Philadelphia; United States Naval Medical Society (Washington).

Friday, *December 3d:* Practitioners' Society of New York (private).

Saturday, *December 4th:* Clinical Society of the New York Post-graduate Medical School and Hospital; Manhattan Medical and Surgical Society (private); Miller's River, Mass., Medical Society.

OBITUARY NOTES.

Thomas F. Cleary, M. D., of Brooklyn, died on Friday, the 19th instant. He was graduated from Bellevue Hospital Medical College in 1883, and had lately been appointed a post-mortem examiner for the Eastern District of Brooklyn. His death is said to have been the result of a dissecting wound.

Letters to the Editor.

MASSAGE AS SUPPLEMENTARY TREATMENT.

109 West Forty-fifth Street, *November 20, 1886.*

To the Editor of the New York Medical Journal:

Sir: A private patient, a young lady nineteen years old, who had yet the visible defects from a paralysis on the right side affecting the lower extremity, came to me for relief from a chronic catarrhal trouble.

She had been under a long course of treatment, mainly electricity, for the paralysis, and considered herself very fortunate in making such a presentable appearance at the time I first saw her. There was, nevertheless, a decided defect noticeable in walking, and she complained of painful cramps in the affected leg, occurring frequently during the week, at night-time always. There was always, also, a decided difference in the temperature of the leg when compared with that of the unaffected side, to be appreciated by feeling with the hand, as well as by the sensations felt by the patient herself.

I advised her to allow me to use massage whenever it was necessary for me to make throat applications, and she consented.

She eventually came to me for the massage alone, as she had been able to appreciate the beneficial results from it. It is now some two months since I first used the massage, and, although some weeks I have only seen her to use it once or twice a week, I have been able not only to increase the circumference of the leg, but also to bring the temperature back to a nearly normal degree, and she has rarely now the nightly cramps so frequently complained of formerly. I would add that, of course, the leg, while increasing in circumference, has become firmer and harder.

Amory Chapin.

Proceedings of Societies.

NEW YORK STATE MEDICAL ASSOCIATION.

Third Annual Meeting, held in New York, Tuesday, Wednesday, and Thursday, November 16, 17, and 18, 1886.

The President, Dr. E. M. Moore, of Rochester, in the Chair.

(*Concluded from page 582.*)

The Address in Forensic Medicine, by Dr. Simeon T. Clark, of Niagara Co., was a brief review of the history and literature of this branch of medicine. To this country was due the credit of having introduced lectures on forensic medicine into medical colleges. The speaker objected to the term legal medicine, for it tended to suggest a discrimination between legal and illegal practice. The subject could not be taught properly by lawyers, nor by persons who were not general practitioners of medicine. The practice of employing partisan witnesses, under the name of experts, was condemned.

Asheville, N. C., as a Health Resort for Consumptives was the title of a paper by Dr. Avery Segur and Dr. T. M. Lloyd. It included a number of letters from physicians who had sent patients to the town or its vicinity. Most of them reported great immunity from phthisis among the native residents, and stated that a large proportion of the patients they had sent there had improved, especially those who were in the early stages of the disease. Some of them had contracted such diseases as diarrhœa, dysentery, and typhoid fever, and the fact should serve as a warning to the town authorities.

Dr. Gleitzmann, in whose institution at Asheville many patients had been treated, said that the chief objection to the place was its subsoil of clay, but that the undulatory surface gave rise to good drainage.

Dislocations at the Ankle.—Dr. C. W. Brown, of Chemung Co., read a paper on this subject, based on two cases of his own and ninety-seven that had been reported to him in answer to letters of inquiry sent out to about a hundred and fifty physicians. These cases included those uncomplicated with fracture, those with simple fracture, and those with compound fracture.

The President, who had seen five cases of dislocation in connection with fracture, said that statistics would not alone influence him to amputate in a case where there seemed to be a possibility of saving the foot, as he had succeeded in doing in some cases where the rules laid down would have led to amputation.

Resolutions on the death of Dr. Austin Flint and Dr. Frank H. Hamilton were offered by Dr. Didama and Dr. Leale respectively, and adopted.

Commercial Prescriptions was the title of a paper by Dr. H. C. Van Zandt, of Schenectady Co., who denounced the practice of prescribing proprietary medicines, characterizing it as tending to make the physician poor and the manufacturer rich, the latter getting the credit in cases of recovery, and as making the practitioner careless and untrustworthy.

A Modification of Politzer's Air-Bag was shown by Dr. H. E. Mitchell, of Rensselaer Co. It was commended as cheap, effective, and convenient.

Two Cases of Intestinal Obstruction were reported by Dr. B. L. Hovey, of Monroe Co., in which, after the failure of other measures, relief had been afforded by infusing water into the bowels while the hips were elevated. In another case of obstruction the trouble seemed to have been due to the use of narcotics. The author also mentioned two cases of the ingestion of foreign substances. In one of them a hundred and forty-seven pins were removed from the rectum after symptoms of peritonitis had appeared, and in the other a pint of cherry-stones was removed.

Naso-pharyngeal Tumor.—Dr. Nathan Jacobson, of Onondaga Co., related the history of a case in which he had removed the growth after a preliminary resection of the superior maxilla. Recovery was delayed by the occurrence of septicæmia, which, the author thought, was to be imputed to the use of styptic cotton.

A Plea for the Use of Sims's Speculum by the General Practitioner was the title of a paper by Dr. W. H. Robb, of Montgomery Co., who maintained that the instrument was the best for all purposes, whether of examination or operation.

Congenital Stenosis of the Nose was the subject of a paper by Dr. A. A. Hubbell, of Erie Co., who reported a case in which a hand-drill was employed to perforate the bony obstacle, followed by the use of large block-tin tubes. The author gave a summary of sixteen other cases, reports of which he had found in literature.

A Discussion on Pulmonary Tuberculosis was opened by Dr. Henry D. Didama, of Onondaga Co., who maintained that phthisis was not hereditary. It had not been met with in the newly born, and the vast majority of phthisical patients did not come of phthisical parents. He would call attention to one employment which, he thought, favored the development of the disease—working in tobacco factories.

Dr. John Cronyn, of Erie Co., admitted that children were not born with the disease actually present; but this did not preclude the existence of a certain inherited tendency to its development under favoring circumstances in after-life.

Dr. H. M. Biggs, of New York Co., said it was almost impossible to demonstrate the acquirement of pulmonary tuberculosis after a particular exposure; but it had been shown that the disease could be produced in animals by causing them to inhale air containing the bacillus. He thought that the long and intimate relation of a healthy person with a phthisical subject was capable of giving rise to the disease. As to ordinary exposure, the resisting power of a healthy organism was usually sufficient to prevent infection.

Dr. H. L. Elsner, of Onondaga Co., thought there were rare cases of phthisis in which the bacillus was absent or only incidentally present; but in true tuberculosis it was always present. We were justified in dividing cases into those of bacillary tuberculosis and those of non-tubercular consumption.

The discussion was continued by Dr. W. H. Flint and Dr. John Shrady, of New York Co.

Nominations of Officers for the ensuing year were reported as follows: President, Dr. Isaac E. Taylor; secretary, Dr. E. D. Ferguson; treasurer, Dr. John H. Hinton; librarian, Dr. J. W. S. Gouley.

Injuries of the Cervical Vertebræ.—Three cases of fracture or dislocation of the cervical vertebræ were mentioned by Dr. R. B. Bontecou. Two of the patients died soon after the injury. The other patient had paralysis, but he lived twenty years and became able to resume his occupation, that of a painter. He was treated by continuous extension for several weeks. At the autopsy the fourth, fifth, sixth, and seventh cervical vertebræ were found fused together. The speaker recommended the extension treatment in such cases.

The Address in Therapeutics was given by Dr. C. G. Stockton, of Erie Co. The speaker called attention to the fact that many seemed to have forgotten that all other departments of medicine were only tributary to therapeutics. Drugs were often used too indiscriminately, and without regard to the evil effects they were capable of producing. The peculiarities of individual patients should be studied, as well as the effects of drugs in general.

Peculiarities in a Case of Ovariotomy was the title of a paper by Dr. John G. Orton, of Broome Co. There had been no evidence of adhesions before laparotomy was undertaken, but they were found to be so extensive that the operation was prolonged to two hours.

Diphtheritic Toxæmia.—Dr. J. C. Hannan, of Rensselaer Co., gave the history of a case that was remarkable for the conflicting diagnoses that were made.

Sacculation and Perforation of the Bladder as Consequences of Chronic Retention of Urine was the title of a paper by Dr. Gouley. The most common situation for these pouches, he said, was on the sides of the bladder, the next most common on its lower and posterior portion, and the least common at the front. Their diagnosis was often extremely difficult; the flapping or contractile motion of the bladder on the catheter at the end of the flow of urine was not a sure sign of sacculation. There was no radical cure, but palliation was to be secured by frequent emptying of the bladder and support by means of a bandage.

A Discussion on Puerperal Convulsions was opened by Dr. W. T. Lusk, and continued by Dr. James Tyson, of Philadelphia; Dr. Isaac E. Taylor, Dr. T. Gaillard Thomas, and Dr. George T. Harrison, of New York; Dr. Darwin Colvin, of Wayne Co.; Dr. J. R. McGregor, of New York; and Dr. G. A. Blumer, of Oneida Co. Dr. Lusk said that enough well-observed cases were on record to show that convulsions might occur without albuminuria. He then spoke of the theory that convulsions were due to reflex irritation proceeding from the uterus, which manifested a tendency to contraction not only at the time of parturition, but to a greater or less extent throughout pregnancy. If a patient's disposition to convulsions was shown in a marked degree, the continuation of pregnancy was a source of danger. If the symptoms were not very marked, or if labor could not be brought on at once, measures should be resorted to to mitigate the violence of the attacks by lowering arterial tension and diminishing the irritability of the nervous system. Venesection rarely failed to produce temporary relief, and much value was to be attached to three sedatives—chloroform, morphine, and chloral.

Dr. Thomas said that it had been maintained that the nephritis, which might be of any one of three varieties, belonged to the common class of desquamative nephritides. This might be true as a pathological fact, but it was not true from a clinical standpoint; for, while ordinary desquamative nephritis was rarely recovered from, the contrary was the case with the form following scarlet fever, and the form complicating puerperal convulsions generally disappeared without any treatment whatever after the cessation of the pregnancy. It was difficult, therefore, to regard them as belonging to exactly the same type of disease. He had seen but two cases in which puerperal convulsions were unattended with unquestionable evidence of renal disease. The speaker related the history of a case in which the convulsions ceased after the death of the fœtus, although it was not expelled until some weeks later. Such cases showed that the symptoms of eclampsia disappeared with the cessation of gestation, also that the renal trouble diminished and soon disappeared after the cessation of pregnancy. Experience had taught him that, in a case in which eclamptic symptoms were well marked, stimulation of the skin, the bowels, etc., was ineffectual, and that the delay attendant on this course of treatment was dangerous to the patient's life. In such cases he would not hesitate to induce labor.

Dr. Taylor would not ignore the value of mild measures in cases of moderate severity, and, before inducing labor, he would consider whether the patient could not be carried along until the child became viable.

Dr. Harrison, who had had assigned to him the therapeutical agents used in cases of eclampsia, spoke first of narcotics, among which one of the most reliable was chloroform; but a case of death from its use, immediately after venesection, had been reported. Chloral was more continuous in its action than chloroform, and its inefficiency in the hands of some physicians was probably due to its having been used in too small quantity. The rational treatment was to produce free diaphoresis by hot baths, etc. Pilocarpine was dangerous. For his own part he regarded catharsis as useful in only a few cases. As to the value of blood-letting, he quoted from Schröder and other German writers who condemned its employment.

Dr. Colvin spoke in favor of venesection.

Dr. Macgregor regarded it as still uncertain whether puerperal convulsions were a cause of insanity.

Dr. Tyson, speaking to the question, "Does eclampsia ever occur without renal complications, and what is the connection between uræmia and the eclamptic attack?" said that, in the great majority of cases, it was the result of a renal complication, but it must be admitted that in a few instances it was quite independent of any such complication. With those few exceptions, puerperal convulsions were due to uræmia. He thought they would be more often arrested if bleeding were resorted to.

The discussion was continued by Dr. Didama, Dr. Squibb, Dr. Segur, Dr. Garrish, Dr. Moore, Dr. Ferguson, and Dr. Colvin.

NEW YORK SURGICAL SOCIETY.

Meeting of October 25, 1886.

Szymanowski's Operation as applied to the Cure of Urethro-perineal Fistula.—Dr. Charles McBurney read a paper with this title. [See p. 513.]

Dr. Lange asked about the length of the fistulous canal leading to the urethra.

Dr. McBurney said it was generally short, as in these cases the knife had been previously used in the perinæum for some reason before they came under his care.

Dr. Sands had not had much experience in these cases, but thought Dr. McBurney's form of operation commended itself very highly. He had himself been quite successful in treating them with the actual cautery, although in cases in which there was a loss of substance the cautery might not prove effectual. He could not gather from the paper, however, whether in any of these cases recorded by Dr. McBurney there was much loss of tissue, and he asked if the author would consider the method suitable in cases where there was much firm connective tissue remaining, or where there were many cicatrices in the perinæum, the result of former disease or operations.

Dr. McBurney replied that in all but two of these cases there was very marked loss of substance, and that it was the loss of substance which specially called for the operation. In several of his cases many non-operative methods had been previously used without success. As to cicatricial tissue from former operations, he did not think it would often contra-indicate the operation, the flaps of the perinæum showing wonderful vitality even when cicatrices were present.

Dr. Sands stated that he once performed a plastic operation on a man for the cure of a fistula of considerable size situated in the penis just behind the glans, and in that instance, as a preliminary measure, he tapped the bladder through the perinæum and passed in a catheter, which, however, had no lateral opening, and for that reason did not thoroughly drain the bladder. While the wound was progressing favorably, on the third day, owing to the defect mentioned, considerable urine was voided by the urethra; the result of the operation, however, was successful. It seemed to him that urethroplasty depended largely upon the ability of the operator to keep the wound free from contact with the urine.

Dr. McBurney replied that, if the bladder was to be emptied in the manner described by Dr. Sands, it would make a great many punctures necessary.

Dr. Sands thought that only one puncture through the perinæum would be required.

Dr. McBurney thought the point of puncture would be in the field of operation, and the catheter, being left *in situ*, would produce irritation, as it had sometimes done when introduced behind the prostate, which latter proceeding had frequently failed to attain its object and had even caused death. His plan was to wash out the bladder after urination and before the catheter was withdrawn, so that no urine could get at the wound. In his last five cases there had been no difficulty in carrying out this plan, and it was kept up for two or three weeks night and day.

Dr. Lange had succeeded in several instances of urethral fistula—two in the pendulous and one in the perineal portion—by leaving a Nélaton's soft catheter permanently in the bladder. He had operated in such a manner that he resected the part of the urethra in which the fistula was situated, together with the surrounding cicatricial tissues. The resected ends were then made free to some distance and united by buried catgut sutures, which did not pass through the whole thickness of the mucous membrane. The edges of the integument were brought together by silk-worm sutures in combination with very thin lead plates, the silk-worm thread passing through the integument, through the external layer of the urethra on both sides of the catgut suture, and through the integument on the other side.

Dr. Gerster asked if the urine was acid in all the cases reported.

Dr. McBurney could not say.

Dr. Gerster thought that where the urine was acid the chances were infinitely better. If the urine was alkaline (ammoniacal), it led to sloughing of the wound, and in those cases the catheter was of great importance. He mentioned five successful cases in which he had operated, together with that of a man suffering from syphilis of the brain and also from urethral fistula; after the operation the catheter was inserted, but, owing to spasm of the bladder, he thought best to leave the catheter in the urethra, but not extending into the bladder; then, when the man wished to urinate, the nurse pushed it in about an inch farther and drew off the water, after which the catheter was withdrawn from the bladder only. This proved so successful that he had tried it in several cases, but thought the greatest advantage was secured in children. In two cases in children he had used it during the last year, leaving the management of it to the nurse after the first lesson.

Dr. Briddon thought the very good results secured by Dr. McBurney had been owing to the preparatory care as well as the operation itself. He thought Szymanowski's operation was designed more especially for fistulæ of the penile portion of the urethra. He had operated in two cases, one of which proved successful and the other unsuccessful. He also considered it a well-established fact that where the soft catheter was retained, the urine would escape by the side of the instrument.

Dr. Lange called attention to a form of urinary fistula occurring in the perineal region which differed in character from those mentioned by Dr. McBurney, and he had only succeeded in curing one case out of those he had treated by excising the fistulous tract as far as he was able to trace it. In the other four cases, except one, he failed to trace the fistulous canal to the urethra, although drops of urine would pass from the opening. In one case the fistulous opening was found right before the prostate. He presumed the cause to be tuberculosis of the prostate, as upon pressing upon this gland from the rectum drops of pus issued from its tissue and the character of the granulations made it probable. In one case the fistula healed temporarily after it had been excised, but at the end of six months burst out again, owing to an attack of gonorrhœa; this patient appeared consumptive, but there were no physical signs of phthisis. He thought the difficulty was in the length and twisting of the canal, and that cases of this class were probably sometimes tuberculous in origin.

Dr. Stimson asked Dr. McBurney if Anger's operation for hypospadias was not of the same kind.

Dr. McBurney had only seen drawings of it, but thought it was different.

Dr. Stimson was under the impression that it very much resembled Szymanowski's operation.

Dr. McBurney did not think it would make much difference how large the fistula was; it could be treated on the principles he advocated. If the wound was an inch or more in length, a piece of skin might be taken from the scrotum, and he had done so where the wound had been in the anterior portion, the two side-flaps being drawn over it.

(*To be continued.*)

NEW YORK ACADEMY OF MEDICINE.

Meeting of October 21, 1886.

The President, Dr. A. Jacobi, in the Chair.

Pulmonary Emphysema.—Dr. Francis Delafield read a paper in which he said that the descriptions of pulmonary emphysema usually found in text-books represented about the ideas of the medical student at the time he graduated, but soon after graduation he had found that these ideas did not correspond with what he observed. He found that compensating and senile emphysema were not of much importance, but that substantive emphysema was, and that it was a very common and a very serious disease. He found at autopsies that the dilatation of the air-vesicles was not always in proportion to the severity of the symptoms, and he began to wonder why such dilatation was rarely an essential part of the disease. He noticed that very few of his patients had blown on wind instruments, and that many had not had bronchitis, and he doubted whether the expiration and the inspiration theories were worthy of having been committed to memory. He found that many cases were hereditary, that the immunity from phthisis and pneumonia in patients with emphysema was hardly all that could be desired, that the barrel-shaped chest was not so often present as he had expected, and that exaggerated tympanitic resonance was not very common; and he was occasionally puzzled by patients who seemed to have emphysema, but without the symptoms which he had been led to believe were characteristic of that disease. It seemed, therefore, worth while to abandon the traditional descriptions of emphysema, and to state fairly what we did and what we did not know about the disease.

Cases of vesicular emphysema could be divided into three classes, as heretofore—namely, senile, compensating, and substantive emphysema. Senile emphysema was of common occurrence, although not of great importance. It seemed to be a senile change in the parenchyma of the lungs; the walls of the vesicles were thin, their cavities were dilated, and they might rupture into each other. There was, however, no obstruction to the passage of the blood through the lungs, nor dilatation of the right ventricle of the heart, nor general venous congestion. This condition, when well developed, gave the loud tympanitic percussion-note said to be characteristic of emphysema. There was no marked dyspnœa, but chronic bronchitis was often present. The disease had no decided effect on the general health. He believed that in some patients substantive emphysema was first developed, and as they grew older it was modified by senile changes into something resembling senile emphysema. It was not always easy during the life of the patient to distinguish between senile and substantive emphysema, especially as chronic bronchitis might be present with either, but a distinction was important, as substantive emphysema was a serious matter, while senile emphysema was not. Compensating emphysema involved only one lung, or a part of one lung. It was seen most frequently with phthisis, and with compression of the lung following pleurisy. In some cases the change in the lung seemed to be simply an hypertrophy of its tissue, while in others there was a dilatation of the air-vesicles, with thinning of their walls. In still others the emphysema, although it might seem to compensate for the obstruction or obliteration of lung-tissue, was like substantive emphysema. Substantive emphysema was formed by chronic inflammation, a pneumonia; and dilatation of the air-vesicles was more the result of this inflammation, and not the essential lesion of the disease. The inflammation was of the same type as that which so often attacked the endocardium, the inner coat of the arteries, the liver, and the kidneys; a chronic inflammatory change, with the production of new fibrous tissue, and, at the same time, with atrophy and disappearance of normal tissue. The walls of the air-vesicles and of the air-passages were the parts of the lungs first involved in the inflammation. These walls were in some parts of the lungs thickened and in others thinned. Where the walls were thinned, there was apt to be dilatation. Such a dilatation affected the air-passages rather than the air-vesicles, and might be confined to the former. The degree of dilatation varied very much in different cases. It was not in relation to the severity of the symptoms, and the disease might go on to its fatal termination with hardly any such dilatation. He did not mean, however, that the condition of the lungs was not made worse by the dilatation. It unquestionably was; but, on the other hand, most of the symptoms of emphysema might be present, and the disease prove fatal, with but very little dilatation. In fact, he believed that many cases of emphysema were overlooked at autopsies, because no dilatation of the air-spaces was visible to the naked eye. In some cases there were little holes in the walls of the air-passages and vesicles, formed in the spaces inclosed by capillary blood-vessels. They were found both at the periphery and at the center of the vesicular walls, usually several in a single vesicle, some very minute, others of considerable size. Their edges were sharp-cut. They were found in vesicles of normal size, as well as in those which were dilated. Although these changes in the air-vesicles constituted the essential lesion of substantive emphysema, yet the emphysema extended, as a rule, and reached other parts of the lung, the epithelial cells which lined the air-spaces were increased in size, and the mucous membrane of the bronchi became the seat of catarrhal inflammation. The disposition to the formation of new connective tissue became more marked, so that the walls of the air-cells were very much thickened, and their cavities deformed and obliterated. The septa between the lobules, the walls of the bronchi and blood-vessels, and the pulmonary pleura were all thickened, and very frequently there were also extensive pleuritic adhesions, so that the entire lesion assumed the form of a well-marked interstitial pneumonia.

In the milder cases there was no disturbance of the circulation of the blood; but in the severer cases such disturbances became one of the worst features of the disease. It seemed evidently to be due to some obstruction to the passage of the blood through the lungs, for the right ventricular wall became dilated and hypertrophied, and venous congestion of the viscera and skin, with dropsy, was established. It had been said that the obstruction to the passage of the blood through the lungs was due to dilatation of the air-spaces and obliteration of the capillaries in the walls. This explanation certainly could not be true for all the cases, for we found the most marked evidences of general congestion in cases in which dilatation of the air-spaces was trifling, and complete artificial injection of the blood-vessels could be easily made after death. He believed that in a large number of cases the obstruction to the passage of the blood through the lungs was due not to structural changes, but to contraction of the small arteries in the lungs, which existed during life and disappeared after death.

The disease was apt to begin between the ages of forty and forty-five years. Hereditary influence was marked. In general we might say that the same causes which led to chronic endocarditis, chronic endarteritis, cirrhosis of the liver, and chronic diffuse nephritis also led to the development of substantive emphysema. Clinically, it was much more important to observe the cases in which the disease was but moderately developed than those in which it was advanced, for moderate cases were to be benefited by treatment, while bad ones were not. In the lesser degrees of emphysema there was no change in the shape of the thorax; in the more advanced cases there was prominence of the sternum and costal cartilages. In very bad cases the barrel-shaped deformity might be reached. The pulmonary resonance might remain unaltered for a considerable length of time. When changed, there was either a rather dull note of wooden quality or exaggerated resonance of a vesicular or vesiculo-tympanitic quality. The respiratory murmur was feeble, or there was feeble inspiration with longer, louder, low-pitched expiration, or both inspiration and expiration might be exaggerated, loud, and high-pitched. Bronchitis, when present, added its sibilant and sonorous breathing and râles. There were many persons in whom substantive emphysema developed and continued for years without giving rise to any rational symptoms, and, yet, even in such persons, it was often possible to be pretty sure of the presence of the disease, because they were persons whose general physical condition and age were such as were usually associated with emphysema. There were other patients in whom associated Bright's disease or cardiac disease gave rise to such marked symptoms that the emphysema passed unnoticed. Of the regular cases, dyspnœa was one of the most marked symptoms, at first developed only by exertion, but afterward becoming constant. It was a question of importance how much the dyspnœa was due to the condition of the lung-tissue and how much to the contraction of the blood-vessels. The complicating bronchitis gave rise to a variety of symptoms—cough, expectoration, hæmoptysis, febrile movement, and night-sweats. General venous congestion gradually developed.

The behavior of the disease was very much like that of atrophic chronic Bright's disease—a slow inflammation which gradually changed the structure of the affected organs; the organs, however, continued to perform their functions moderately well until their structure had become changed a good deal, and, in addition, disturbance of the circulation had been established. Then, either gradually or with a sort of explosion, the decided symptoms of the disease made their appearance.

He would call attention to but two points in the treatment. 1. It seemed probable that the same rules as to climate, diet, and mode of life which apparently delayed or arrested the progress of other inflammations of the same class might have a like effect on the progress of emphysema. 2. It was a question whether a large part of the dyspnœa on exertion and some of the asthmatic attacks were not due principally to contraction of the small arteries in the lungs. If this was the case, we should expect those drugs which dilated the arteries and capillaries to relieve the dyspnœa, and, as a matter of fact, many of the drugs which were most efficacious in controlling the dyspnœa of asthma did belong to this class.

Dr. E. Darwin Hudson, Jr., regarded the paper as essentially a pathological presentation of a subject which he had studied chiefly from the point of view of physical diagnosis and treatment. We had to take a type for every disease, and he was still of opinion that emphysema was, as had been defined by many old writers, essentially a rarefaction of the pulmonary vesicles. As to treatment, in a large number of cases in which there was loss of elasticity and resiliency of the structure of the smaller tubes, he thought one or another of the pneumatic cabinets would be of benefit. As to the pulmonary pitch, in some cases it was high, in others low. There might be the paradoxical condition of barrel-shaped chest with a percussion-note of tympanitic quality, short in duration and high in pitch, the fact being that the pulmonary structure had little to do with the pitch of the percussion-note, the chest-wall being in such a state of respiratory fixation that it would not vibrate to the percussion-stroke. While in a certain number of cases the emphysema was due to the gouty diathesis, in others there could be no doubt that it was a mechanical result of mucous and submucous changes, and that the appropriate treatment was that of chronic bronchitis.

Dr. Charles Heitzman had examined a large number of specimens of emphysematous lungs, and it seemed to him that Dr. Delafield had not demonstrated a pure case of emphysema. He agreed with Dr. Hudson that the cases presented were not those of substantive emphysema at all, but combinations of emphysema with chronic interstitial pneumonia; not a primary disease, but a secondary. He had a large number of specimens illustrating pure substantive emphysema. He did not see the necessity for resorting for an explanation to a state which we could not prove existed—namely, contraction of the arterioles.

Dr. R. Van Santvoord had found caffeine the best cardiac tonic in emphysema, and he thought the benefit derived from it supported the author's views regarding contraction of the blood-vessels in the emphysematous lung.

The President thought the description given by Dr. Delafield of emphysema, and the illustrations shown, were analogous to the condition existing in bronchiectasis. He also thought that for the relief of the chronic interstitial inflammation which existed in emphysema iodide of potassium would be useful, as it was useful by producing absorption in asthma.

Dr. Frederick A. Castle queried whether calcium chloride would not be useful in these cases by causing absorption of the connective-tissue deposit. He thought also benefit was to be derived from nitrite of amyl by its action upon the blood-vessels.

Dr. Delafield said he had tried to present his subject from both the clinical and the pathological standpoint. As to caffeine, he had regarded it and convallaria as stimulants particularly of the right side of the heart, and he had employed them with benefit in cases requiring stimulation of the right rather than of the left side of the heart, as in emphysema and pneumonia. Iodide of potassium was one of the most beneficial drugs in emphysema, and he thought it might be supposed to produce its effects through its influence upon the blood-vessels, for it was pretty well established that it relaxed the smaller arteries and capillaries. We gave it very frequently in cardiac disease, not because of its action upon the heart itself, but because of its power to relax the smaller arteries and capillaries and thus unload the heart. Chloral hydrate was also beneficial in emphysema by its power to relax the smaller blood-vessels.

AMERICAN LARYNGOLOGICAL ASSOCIATION.

(*Continued from page 527.*)

A Novel Procedure for the Removal of a Subglottic Laryngeal Growth was reported by Dr. W. C. Jarvis. [See page 597.]

The President (Dr. Allen): I am happy to compliment Dr. Jarvis upon his achievement. He has with his snare successfully removed growths from the nasal chambers, from the pharynx and larynx, and now has succeeded in removing a growth from below the vocal bands.

Dr. Hooper: What was the exact situation of the papilloma?

Dr. Jarvis: My statement that it was situated just below the left vocal band was based on the fact that after its removal a hæmorrhagic spot was distinguishable in that situation. It is really impossible to say where it originally sprang from, as there were several growths with different points of attachment. It is certain, however, that the entire mass was below the vocal bands.

Dr. Hooper: What I want to know is this. The problem in removing a papilloma is to get hold of it; after you get hold of it there is no difficulty—it comes off as easily as a ripe raspberry from its stem. If it was situated below the cord, I can not understand why there should have been any difficulty in removing it with the Mackenzie forceps. What is the special utility of the snare?

Dr. Jarvis: I have already stated that with the Mackenzie forceps I did succeed in removing a minute portion of the growth. There existed a marked tendency on the part of the laryngeal muscles to contract instantly and powerfully, even before the instrument reached the cords, which, while it did not prevent my inserting the Mackenzie forceps within the larynx, nevertheless made it difficult and even dangerous to the integrity of the soft parts to expand the narrow blades within the larynx. My efforts in this direction were only rewarded with discouragement and the temporary disappearance of the patient.

Dr. Sajous: It seems to me that in this case the wire did not act as a snare; the forceps removed the growth, and the wire acted more as a guide than as a snare. There can be no question but that by means of the wire the operator was able to ascertain that his instrument was on a level with the tumor and not above it, and that, through the use of the wire, the growth was simply brought into the bite of the forceps.

Dr. Jarvis: Despite the view expressed by Dr. Sajous, the fact remains that without the wire it was impossible to remove the growth. When the forceps alone was employed, its biting portion evidently either did not touch the papilloma or, the blades thrusting it aside, merely grazed it. The wire loop, however, not only played the part of a searcher, it embraced the growth in substantially the same manner as any snare would. The blades of the forceps simply made it possible to manipulate the hair-like wire in the contracted larynx. The same result might have been obtained if, for instance, two écraseur tubes had been substituted for the blades of the forceps.

This is the first case on record in which a subglottic tumor has been removed without anæsthesia, and without opening the larynx or trachea. I have looked over the records trying to find a similar case; but, after close research, have not been able to find a single one. In von Bruns's case, which he considered sufficiently rare to devote to it some thirty pages of his book, a papilloma was removed from below the vocal cords with the forceps; but tracheotomy had been performed previous to the operation, and the patient was under the influence of an anæsthetic, so that the operator could proceed deliberately and take as much time as he liked.

Book Notices.

The Refraction and Accommodation of the Eye and their Anomalies. By E. Landolt, M. D., Paris. Translated, under the Author's Supervision, by C. M. Culver, M. A., M. D., etc. With One Hundred and Forty-seven Illustrations. Philadelphia: J. B. Lippincott Company, 1886. Pp. xi–597. [Price, $7.50.]

This work is a translation of the first and second parts of the third volume of the complete treatise on ophthalmology by De Wecker and Landolt, which has been in course of publication in French during the last five or six years. The work is divided into five chapters, of which the first treats of the physical portion, the second, third, and fourth are devoted to a consideration of the theoretical portion, and in the final chapter we have the clinical portion. This division of the work into three parts, which are really independent of each other, has simplified the author's task of making comparatively easy reading of the whole. The first, or physical portion, is a presentation of the facts of the science of optics in a very lucid manner, though it presupposes in the reader a knowledge of the higher mathematics for its perfect comprehension. We would call special attention to the sections on the measure of refraction in practice and the relation between the old and new systems of numbering lenses, and on the combination of three spherical refractive surfaces, as models of clearness and simplicity. In the second, or theoretical portion, the author makes several subdivisions, and considers separately the static refraction of the eye, the dynamic refraction of the eye, and convergence, and to the latter is given special prominence as a matter in which the author is deeply interested, and to which he has given much study. In the section on dioptometry the author describes all the usual methods briefly but clearly, including those of Loiseau and Schmidt-Rimpler. He gives considerable space to the objective method of determining the refraction of an eye, known as "pupilloscopy," but prefers to use the term "koroscopy," as being etymologically more correct. It should not be forgotten that the phenomena of koroscopy here described refer to the examination with the concave mirror, and are very different when the examination is made with the plane mirror. In determining the amplitude of convergence, the author recommends his own ophthalmo-dynamometer, which gives not only the distance of the near point of convergence in centimetres, but also the corresponding maximum degree of convergence in metre-angles. The chapter on the clinical portion of the work is the part which will prove of greatest value to the inexperienced ophthalmic surgeon. The sound judgment and great common sense shown in the prescribing and fitting of glasses, as well as in other necessary treatment, are most admirable. Considerable importance is laid upon the necessity of a careful study of the effects of glasses on convergence. Under the head of the convergent strabismus of hypermetropes, Landolt attributes considerable value to the method of *orthoptic training* in some cases as a complement to surgical treatment. He considers at some length the important matter of malignant myopia, and this part of the subject is enriched with several chromo-lithographic illustrations of the fundus of eyes which are the seat of progressive myopia. The subject of the prophylaxis of myopia receives due attention, but we regard it as unfortunate that there is no consideration of astigmatism from the *clinical* standpoint. The book is provided with an excellent index, both of authors and of subjects, and for this the translator, Dr. Culver, deserves the thanks of his readers, as well as for the general excellence of the translation. The illustrations are all good, and the paper and letter-press are everything that could be desired.

A Treatise on Amputations of the Extremities, and their Complications. By B. A. Watson, M. D., Surgeon to the Jersey City Charity Hospital, etc. Illustrated by upward of Two Hundred and Fifty Engravings and Two Full-page Plates. Philadelphia; P. Blakiston, Son, & Co., 1885. Pp. xix–762. [Price, $5.50.]

An "encyclopædic monograph," as the author styles it in his preface, of more than seven hundred pages, must almost necessarily contain a large amount of useful information, the compilation of which implies considerable industry. Beyond this, however, it is difficult to find much to commend in the volume. We have a right to expect in such a work careful consultation of original authorities, but the author contents himself, almost invariably, with extracts, generally in quotation-marks, from Heath, Erichsen, Ashhurst, or Agnew. This is particularly true of the chapters devoted to special amputations, which are far less complete than Ashhurst's work on the same subject in Volume I of the "International Encyclopædia of Surgery." Reference to a few errors or omissions, selected almost at random, will give a fair idea of the value of the book as an authority. Under amputations of the fingers we are directed not to amputate at the middle joint, except in the case of the index finger, because, no flexor tendon being attached to the proximal phalanx, it is apt to remain permanently extended. Surely every medical student understands the action of the interossei and lumbricales as flexors of the first phalanges, and every surgeon has seen cases which prove that the supposed danger does not exist. Instead of Syme's amputation, we are given a modification, attributed to Gross, which many would not think an improvement. The original at least deserved a place, if only for comparison. Two long chapters on wound dressings, while giving in detail a number of obsolete methods, carry us no farther in antiseptic technique than the complete Lister dressing, spray and all (taken at second-hand from American journals). Iodoform, corrosive sublimate, and the thousand simplifications of antiseptic surgery seem never to have been heard of. Of permanent dressings we hear of nothing more recent than Gamgee's early attempts and Guérin's cotton wadding. These are the most extraordinary omissions in a work professing to have been brought well up to date that we have ever known. Did space permit, it would be easy to multiply examples of this kind, but enough has been said to show how far below the standard of contemporary medical literature the book must be placed.

Practical Guide to Antiseptic Midwifery in Hospitals and Private Practice. By Henry J. Garrigues, A. M., M. D., Professor of Obstetrics in the New York Post-graduate Medical School and Hospital, etc. Detroit: George S. Davis, 1886. Pp. 128. [Price, 25 cents.]

The principal impression made upon the reader's mind by a careful perusal of this admirable little *brochure* is one of regret that a work which represents the result of many years of study and observation should be condemned to appear in a form so unworthy of its intrinsic merits. The author has condensed within the compass of a pamphlet sufficient matter to form a monograph of enduring fame. It is impossible to do justice to this unpretentious work within a brief space; the style and matter are alike worthy of great praise. The subject is covered, and covered thoroughly. We have seldom seen a small manual (the price of which is actually below that of a trashy novel) to which we could apply more truthfully the often meaningless phrase—"No practitioner can afford to be without it." Those who are acquainted with the many valuable contributions which the author has made to obstetrical knowledge will unhesitatingly affirm that nothing slovenly and inaccurate can come from his pen. If the present volume receives the attention from the general profession which it deserves, its mission will be wider and more honorable than that of many a ponderous tome.

Diseases of the Digestive Organs in Infancy and Childhood, with Chapters on the Investigation of Disease, and on the General Management of Children. By Louis Starr, M. D., Clinical Professor of Diseases of Children in the Hospital of the University of Pennsylvania, etc. With colored plate and other illustrations. Philadelphia: P. Blakiston, Son, & Co., 1886. Pp. xvi–17 to 385. [Price, $2.50.]

We took up this book with great expectations, fostered by the good work the author had before done in this department. We have laid it down with great disappointment. While it contains much that is good, there is little that is new to be found in its pages, and very much that is both new and good has found no place there. It can scarcely be said to be abreast with the times in its discussion of the topics treated.

The material found in the first chapter, on the "Investigation of Disease," is spread over forty pages; but there is little in it that can not be read out of almost any text-book on the diseases of children.

The body of the work covers two hundred and seventy-nine pages, and treats of the diseases of the mouth, pharynx, tonsils, stomach, intestines, liver, and peritonæum. By introducing so many topics, the author has been prevented by lack of space from discussing any of them with the thoroughness we should expect in a special work. The articles are generally briefer than those found in the ordinary text-books.

The author has followed the English fashion of padding his book extensively with prescription formulæ; these are uselessly multiplied, and many are repeated three and four times in different parts of the work.

Dietetics is a subject which has been well worked up by the writer, who argues well that food prescriptions should be as carefully made and as conscientiously carried out as those for drugs. Many excellent ones are given in the book; in fact, this is its chief value. In this direction he has followed (and closely, too) the lead of Eustace Smith in his "Wasting Diseases of Children." But he could not have done better. The chapter on the general management of children covers forty-two pages, and is full of practical common sense. To our mind it is the best part of the book. The publishers' work has been well done, the printing and paper are of the best, and for a first edition the volume is surprisingly free from small errors.

Handbuch der physiologischen Optik. Von H. von Helmholtz. Zweite umgearbeitete Auflage. Mit zahlreichen in den Text eingedruckten Holtzschnitten. Zweite Lieferung. Hamburg und Leipzig: Verlag von Leopold Voss, 1886. Pp. 81 to 160, inclusive.

The same, Dritte Lieferung. Pp. 161 to 240, inclusive.

An examination of the second and third parts of the new and revised edition of Helmholtz's "Physiological Optics" shows that the work of revision under the author's own hand is being carried out with extreme care. The work has now been revised as far as the second division of the great subject, or the "Doctrine of Visual Impressions." There is a brief presentation of the advantages of Abbé's refractometer in determining the refractive relations of the various media of the eye, and of the method to be pursued in determining the shape of the lens in the living eye. The section on the individual differences in the refractive condition of the eye has been entirely rewritten, and also that on the theory of the mechanism of the change of shape in the lens during the act of accommodation. The latter is a specially careful piece of work. The section on the asymmetry of the eye is entirely new, and contains two new illustrations. It is to be hoped that the revision will be pushed on rapidly, so that before a year has passed we may have the entire work completed and ready for reference.

On some Forms of Paralysis from Peripheral Neuritis, of Gouty, Alcoholic, Diphtheritic, and other Origin. The Harveian Lectures for 1885. By Thomas Buzzard, M. D., Fellow of the Royal College of Physicians, London, etc. London: J. & A. Churchill, 1886. Pp. viii–147.

The aim of these lectures, according to the author, is "to show that many forms of paralysis which would at first sight point to organic disease of the central nervous system are in all probability dependent essentially upon changes in the periphery of the cerebro-spinal nerves." The author endeavors to explain away the natural prejudice against the term "neuritis" as applied to the pathological condition present in so-called cases of multiple neuritis by calling it a "parenchymatous neuritis," but suspends judgment "as to the propriety of the parenchymatous form being considered as certainly of inflammatory character," and makes "use of the expression as a convenient one which has the advantage of being generally recognized"; a poor reason, as usage should not be allowed to perpetuate a glaring misnomer. The authors quoted and the histories of original cases are excellent, and their presentation, from a clinical point of view, could not be improved upon. Altogether the book is an extremely valuable account of a recently recognized but quite common nervous disease.

Ichthyol und Resorcin als Repräsentanten der Gruppe reduzierender Heilmittel. Von Dr. P. G. Unna. [Dermatologische Studien, Zweites Heft.] Hamburg und Leipzig: Leopold Voss, 1886. Pp. 85. [Preis, 1*M.* 60.]

This little pamphlet was first issued as an "Ergänzungsheft" to the May number of the "Monatsheft für praktische Dermatologie" for 1886, and as such has already been noticed by us in the report on "Cutaneous and Venereal Diseases" in our issue of August 21, 1886, article "Ichthyol and Resorcin."

Female Education from a Physiological Point of View. A Lecture by John Thorburn, M. D., Professor of Obstetric Medicine, Owens College and Victoria University. Manchester: J. E. Cornish, 1884. Pp. 23.

This is an interesting pamphlet, which presents no new facts indeed, but places old ones in a strong light. The author quotes from Emmet, Thomas, and Goodell in support of his statements.

BOOKS AND PAMPHLETS RECEIVED.

Medical Education and Medical Colleges in the United States and Canada, 1765–1886. Illinois State Board of Health.

Removal of the Uterine Appendages. Nine Consecutive Cases. By Mary A. Dixon Jones, M. D., Gynæcologist to the Woman's Hospital of Brooklyn, N. Y. [Reprinted from the "Medical Record."]

The Curette as a Diagnostic and Therapeutic Agent in Gynæcology and Obstetrics. By B. Bernard Browne, M. D., Professor of Diseases of Women in the Woman's Medical College of Baltimore. [Reprinted from the "Transactions of the Medical and Chirurgical Faculty of the State of Maryland."]

First Annual Report of the State Board of Health and Vital Statistics of the Commonwealth of Pennsylvania. Transmitted to the Governor, December 7, 1885.

Meconeuropathia. By C. H. Hughes, M. D., St. Louis, Mo. [Reprinted from the "Alienist and Neurologist."]

Lecciones sobre Enfermedades de la Piel, dictadas por el Profesor Doctor Nicolas Osorio, en la Escuela de Medicina de la Universidad Nacional, y compiladas por los alumnos, J. Garcia, R. Aguero, y G. Gamboa. Bogota: Silvestre y Compañía, 1885.

Causa y Tratamiento racional de la Lepra de los Griegos, hallados por induccion, por Gabriel J. Castañeda, Doctor en Medicina y Cirugía. Bogota, 1882.

El Cólera en Valencia en 1885. Memoria acerca de los trabajos realizados durante la epidemia. Presentada por la Alcaldia al Excmo. Ayuntamiento en nombre de la Junta Municipal de Sanidad. Valencia: Manuel Aluire, 1886. Pp. 8–11 to 180.

Proceedings of the Academy of Natural Sciences of Philadelphia. Part II. April–September, 1886.

Observations and Suggestions in regard to the Method of Operating during the same Anæsthetization for Lacerations of the Cervix Uteri and Ruptured Perinæum. By Thomas A. Ashby, M. D., Baltimore. [Reprinted from the "Maryland Medical Journal."]

Transactions of the Medical Association of the State of Missouri at its Twenty-ninth Annual Session, held at St. Louis, May 3, 1886.

Mental Diseases. By Charles F. Folsom, M. D., Fellow of the American Academy of Arts and Sciences; Member of the American Association of Physicians, 1886. Pp. 99 to 204.

The Relation of our Public Schools to the Diseases of the Nervous System. By C. F. Folsom, M. D., etc. [Reprinted from "Six Lectures on School Hygiene."]

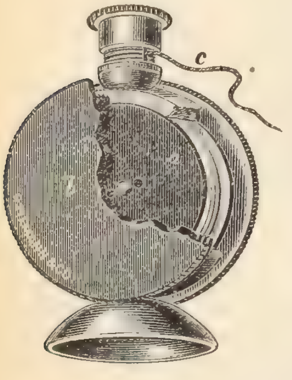
The Surgery of the Pancreas as based upon Experiments and Clinical Researches. By N. Senn, M. D., of Milwaukee, Wis. [Reprinted from the "Transactions of the American Surgical Association."]

New Inventions, etc.

A PORTABLE ANTISEPTIC LIGATURE SPOOL AND BASE.

By George R. Fowler, M. D.,
BROOKLYN.

I have for a long time realized the importance of keeping constantly protected in an antiseptic solution catgut intended for use in strictly aseptic operations. For hospital use this is accomplished with comparative ease by having the gut wound upon glass or hard-rubber spools and immersed in an antiseptic fluid contained in any of the self-sealing fruit-jars, preferably that known as the "Lightning Fruit-Jar." But these are far too cumbersome for private practice, and are likely to be broken by being carried about in the satchel of the practitioner. A protected catgut spool, therefore, readily transportable, and which can be kept constantly immersed in a hydronaphthol or carbolic-acid solution, without danger of leakage or breakage, and from which the catgut can be readily unwound without handling, and thereby risking infection of the entire spool, has therefore always seemed to me to be a desideratum. With this end in view I consulted with the well-known firm of Tiemann & Co., who, I knew, possessed unrivaled facilities for the production of this class of work. They entered readily into the spirit of my wishes, and, upon my furnishing them with a drawing, they produced for me the instrument shown in the figure; *a* represents the spool upon which the catgut is wound, the end of the latter, *c*, passing out of the case, *b* (the side of which is represented as being broken away to show the interior), at the top, through a nipple having a screw-cap. When not in use the end of the catgut is pressed down into the slot in the nipple, and a small portion, sufficient to catch hold of when needed for use, is coiled up in the hollow of the screw-cap, which latter has a milled edge. One of the sides of the case, *b*, unscrews and is removed entirely when it is necessary to replenish the spool.



By means of this little contrivance the gut can be unwound from the spool without handling or removing it from the fluid in which it is immersed. The case can be made of sufficient width to accommodate as many different spools as may be desirable.

Miscellany.

The late Dr. William H. Dudley.—We have been requested to publish the following:

"The late William H. Dudley, M. D., while traveling in Europe, in 1857, conceived the idea of establishing in this country a medical college in conjunction with a hospital, where students might have the advantages of medical and surgical instruction at the bedside of the patient. On his return he communicated his plan to a small number of friends, who, at a meeting held in October, 1857, at the rooms of the German Dispensary, 147 Court Street, Brooklyn, agreed to organize. At subsequent meetings committees were appointed to effect the organization of such an institution, under the name of St. John's Hospital, and to obtain a charter from the Legislature. In March, 1858, it was agreed to change the name to that of the Long Island College Hospital, under which a charter was obtained, and the institution was incorporated. The hospital work was begun in November, 1857, at the rooms of the German Dispensary. That place soon proved inadequate, and in February, 1858, the present property in Henry Street was purchased. To this place the hospital was removed in the following spring.

"No adequate aid being furnished by the public, the work of the hospital only was continued till October 5, 1859, when a meeting of the Regents was called to consider plans for organizing a medical college. The council, then consisting of Dr. Dudley, Dr. C. L. Mitchell, Dr. T. L. Mason, and Dr. John Byrne, submitted a plan, which was adopted. But the Regents, in view of their pecuniary inability to meet expenses, declined to open the school, when Dr. Dudley, Dr. Mitchell, and Dr. Mason offered to guarantee the annual expenses of the school to the extent of $3,000 if the Regents would open the teaching department. This offer they declined, fearing that the debt of the institution would prevent permanent success. Finally the affairs of the institution came to a crisis, and the property was sold to Dr. Dudley for $28,550, including a mortgage of $20,000, which he assumed.

"In this way the doctor's object of saving the institution from destruction was accomplished. Then Dr. Dudley, Dr. Mitchell, and Dr. Mason, courageous and faithful friends of medical education, offered to the Regents to assume all the liabilities of the school for the first term. The offer was accepted, and the opening lecture was delivered on the 29th of March, 1860. When the term closed, these gentlemen offered to assume the liabilities of the school also for the future. The acceptance of this offer made it possible to continue the collegiate department, for the embarrassments of the institution were still so great that the Regents could not afford to aid the medical school. These embarrassments culminated in October, 1861, when the president and secretary of the institution, despairing of success, resigned. If others despaired through these discouraging years, Dr. Dudley was hopeful. Difficulties seemed to inspire him with new courage and determination to make the institution succeed. It was undoubtedly his courage and determination that gave hope to others, who but for him would have abandoned the enterprise. His colleagues in the council were also brave and faithful, and bore their shares of the burden. And there were Regents who would not abandon the institution, and who contributed of their own means and secured the aid of personal friends to make it succeed. At last, on the 16th of February, 1865, after an uncertain existence of many years, a committee appointed to raise money to relieve the institution reported the receipt of $22,800, including Dr. Dudley's subscription for a large sum. The mortgage of $20,000 and other debts were then paid, and the title to the property was retransferred by Dr. Dudley to the corporation of the Long Island College Hospital. In 1866 Dr. Dudley was elected a member of the Board of Regents; he was a regent from that time till his death. He had the satisfaction of seeing the institution, which he had thus originated, fostered, and sustained, and of which in the long, dark days of its adversity he had never despaired, flourish and grow strong, an honor to the country, his profession, and himself, and with which his name should ever be gratefully associated. During the last years of his life he was the president of the college, in which position the wisdom of his advice and the fruition of his work were more and more manifest. This memorial inadequately represents the difficulties encountered by him and his co-workers, both physicians and laymen. Let it be said that he never faltered in his duty to this institution, to which his time, his money, and his best efforts were always freely given, in an unassuming but most liberal and persistent manner. The final success is his best and most enduring monument.

"In the death of Dr. Dudley the Regents have lost a very dear friend and associate, whose place it will be most difficult to fill. The Regents feel that they can not do less than place upon their record this brief memorial of his services and of their personal respect and regard.

"By order of the Board of the Regents of the Long Island College Hospital,
Thomas H. Rodman, *President*,
W. T. Osborne, *Secretary*.

"*November 1, 1886*."

The Health of San Francisco.—According to the Health Department's "Condensed Statement of Mortality" for the month of October, 1886, the whole number of deaths was 425, including 1 from cholera morbus, 6 from cholera infantum, 25 from croup and diphtheria, 2 from cerebro-spinal meningitis, 2 from diarrhœa, 2 from dysentery, 2 from erysipelas, 21 from typhoid fever, 2 from whooping-cough, 5 from pyæmia and septicæmia, and 1 from scarlet fever.

THE NEW YORK MEDICAL JOURNAL, DECEMBER 4, 1886.

Original Communications.

A CONTRIBUTION TO THE CLIMATOLOGICAL STUDY OF CONSUMPTION IN PENNSYLVANIA.*

By WILLIAM PEPPER, M. D., LL. D.,
PHILADELPHIA.

I HAVE selected this subject on account of the universal prevalence and terrible mortality of this disease, and from the feeling that any contribution, however slight, to the study of the local conditions which affect this prevalence and this mortality should have some value attached to it. I need not remind you of the important investigation conducted some years ago by Dr. Henry I. Bowditch upon this same subject as applied to Massachusetts. Suffice it to say that, as the result of a careful study of the answers made by resident physicians of 183 out of 325 townships then existing in Massachusetts, this distinguished physician arrived at the following conclusion:

"Medical opinion in Massachusetts, as deduced from the written statements of resident physicians in 183 towns, tends strongly to prove, though, perhaps, not affording perfect proof of, the existence of a law in the development of consumption in Massachusetts; which law has for its central idea that the dampness of the soil of any township or locality is intimately connected with, and probably as cause of, the prevalence of consumption in that township or locality." It is, of course, evident that such a conclusion, if fully confirmed and established as a law, would be of vast and far-reaching importance. It does not interfere in any way with the operation of heredity, or of other predisposing or determining causes. It might have interesting relations, but could not present any incompatibility with the more recent doctrines of the bacillar nature of true tuberculous consumption. It is manifestly difficult to subject this theory to searching and conclusive investigation; but, so far as investigation has been made in other portions of this country or abroad, the evidence has tended to confirm Dr. Bowditch's position.

Independently of Dr. Bowditch, and without knowledge of the views which he had already expressed, Dr. G. Buchanan, of England, had arrived at almost identical conclusions.

The ninth and tenth reports of Mr. John Simon, Medical Officer of the Privy Council, contain the results of Dr. Buchanan's work, which was carried on in 1865, '66, and '67. Through this investigation it was discovered that in certain English towns where the drying of the subsoil had been accomplished by the construction of sewers, etc., and where the water-supply had been improved, the mortality from phthisis had decreased. In Salisbury the death-rate from phthisis had fallen 49 per cent.; in Ely, 47 per cent.; in Rugby, 43 per cent.; in Banbury, 41 per cent. In towns where no improvements had been made, or where the conditions were already good, there was no such corresponding change in the death-rate.

Dr. Buchanan summarizes the facts brought out in his investigation of phthisis in Surrey, Kent, and Sussex, as follows:

> "There is less phthisis among populations living on pervious soils than among populations living on impervious soils."
>
> "There is less phthisis among populations living on high-lying pervious soils than among populations living on low-lying pervious soils."
>
> "There is less phthisis among populations living on sloping impervious soils than among populations living on flat impervious soils."
>
> This connection between the influence of soil and phthisis was established by—
>
> "1. The general agreement in phthisis mortality between districts that have common geological and topographical features of a nature to affect the water-holding quality of the soil.
>
> "2. By the existence of general disagreement between districts that are differently circumstanced in regard to such features; and
>
> "3. By the discovery of pretty regular concomitancy in the fluctuation of the two conditions from much phthisis with much wetness of soil to little phthisis with little wetness of soil."

I will proceed at once, then, to state that in the preparation of this paper I have pursued the method adopted by Dr. Bowditch in his studies of consumption in Massachusetts, which extended from 1854 to 1862, when he delivered his address before the Massachusetts Medical Society on Locality as one of the chief causes of consumption in New England. I think you will agree with me that the result possesses some interest, though I am forced to confess that one of the most striking features brought out has been the paucity of existing records upon a subject of such supreme importance to the community, and the great difficulty of obtaining accurate data even with the most cheerful and courteous co-operation of the profession. The present address is to be regarded only as the first crude and imperfect result of an investigation, which I hope to be able to continue to a much greater degree of completeness. It may not be without interest to give a short account of the physical characters of the area under consideration, in the preparation of which liberal use has been made of a highly interesting report on the topography of Pennsylvania, which was courteously written at my solicitation by Charles A. Ashburner, Esq., M. S., geologist in charge of the Geological Survey of Pennsylvania.

The State of Pennsylvania measures from east to west 290 miles; from north to south, 150 miles; having an area of over 45,000 square miles. It is a distinctly mountainous State. The Alleghany and Blue Ridge Mountains course diagonally through the central portion from the northeast corner to the southwest; upon the one side the drainage is toward the Atlantic seaboard, and upon the other toward the valley of the Mississippi.

Professor Lesley has suggested a topographical division of eastern Pennsylvania into the Southeastern or the Seaboard district, and the Middle or Appalachian district.

The former is bounded on the west and northwest by the Kittatinny or North Mountain. The latter is bounded on the southeast by the Kittatinny Mountain and on the north by the escarpment of the Alleghany Mountains. The valley of the southeastern district is underlain by the lower silurian limestone, forming rich, fertile soils, and, in the northwestern part of the district, by soils disintegrated from the Hudson River States and shales.

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* Read before the American Climatological Association at its third annual meeting.

The Appalachian district of the eastern part of the State has been subdivided by Professor Lesley into the (1) Catskill or Pocono wilderness at its eastern end, (2) Anthracite Coal Region, (3) the open country of the middle Susquehanna, and (4) the mountains of the Juniata country, in the heart of which lies the Broad Top coal-basin.

The Pocono division is the continuation of the Catskill Mountains in New York southward into northeastern Pennsylvania embraced within the counties of Wayne, Pike, Monroe, and Lackawanna, and may be said to practically end in the Nesquehoning Mountain west of the Lehigh River. The northwestern part of this division, lying to the east and south of the eastern end of the Wyoming-Lackawanna Valley, consists primarily of an elevated plateau cut through by numerous streams running in many instances in narrow and deep valleys. The elevation of the summits ranges from 1,200 to 1,800 feet above tide-level. The soils of the district are poor and cold; the region is sparsely settled, but is one of the most healthy sections of northeastern Pennsylvania.

Passing upward from the counties of the southeastern portion, we meet successive chains of mountains; first the Blue Ridge, stretching from Allentown, in Northampton County, to Chambersburg, Franklin County, varying in elevation from 2,000 to 1,000 feet; next the Blue Mountains, from Delaware Water Gap to Gettysburg, reaching an altitude of 2,000 feet. Between the Blue Mountains and the Alleghanies, still farther to the north and west, lies the valley of the Susquehanna River, the branches of which drain parallel chains of long and narrow mountain ridges of unusual uniformity. This Appalachian valley is an undulating plain having a width of from 10 to 18 miles, and is one of the most attractive portions of the State. Its elevation is from 200 to 600 feet.

A glance at the map will show where the Susquehanna has cut its way through successive chains of mountains. These notches at numerous points afford a passage to the Delaware, the Lehigh, the Schuylkill, and the Susquehanna, and in this way an area equal to two thirds of the State is drained across the whole breadth of these mountain chains.

Among these ridges and valleys are broad areas of tableland preserving the same general elevation of the ridges, in the neighborhood of 2,000 feet. Upon this table-land are found, on the north, Kane, Clermont, Williamsville, in McKean County. To the southward, in Indiana and Cambria Counties, we have Indiana, Ebensburg, Cresson; still farther south we have Somerset, Berlin, and Fairhope; in Sullivan County we have Laporte and Eaglesmere. Nearly all these points have an elevation of over 2,000 feet.

This area of table-land, comprising in the aggregate one fourth of the State, rises abruptly as one approaches from the east, and forms a marked barrier 175 miles in length.

Not only is the middle portion of the State more diversified, rivers and their valleys being interspersed through the mountain ridges, but there is a marked difference between its geological character and that of the remainder of the State; it is much older. According to the estimates of geologists, the mountain ranges were at one time ten times as high as they are at present. At no point in Pennsylvania do we now find elevations greater than 2,500–2,700 feet. The upper strata have been swept away from the whole Susquehanna Valley region, leaving the old red sandstone and the older rocks of the Silurian age. When an attempt is made, mentally, to restore the coal-beds stretching from the anthracite region at Wilkesbarre and Scranton to the Pittsburgh coal-fields, together with the accompanying strata, not now seen in central Pennsylvania, we get some idea of the enormous extent of erosion in the middle of the State. According to the estimate of Professor Lesley, five miles of overlying strata had to be removed before the present formations were exposed.

Pennsylvania is noteworthy for its thorough drainage. There is scarcely a lake in its entire extent, and few swamps. The wet lands are of very small extent, and are found in Crawford and Mercer Counties. They do not have an important bearing upon the health of communities. Many of these swamps are covered by laurel thickets, and most of them are less than a mile across their widest portion.

An illustration of the important relation which topography has to the health of inhabitants may be given as follows: McKean County is made up of high elevated plateaus, extensively serrated by rapidly descending narrow valleys having various directions. The valleys descending toward the north and northeast are exposed to the unfavorable storm winds which generally blow from that direction, particularly south of the great lakes. The valleys descending toward the south and southwest are shut off from these winds, and get the full benefit of the warmer winds, coming from the south and southwest, and which are more favorable to healthfulness.

The number of counties is 67, the number of physicians is about 5,000, as nearly as can be estimated. This brief statement indicates the large scope of the inquiry I have started upon. The purpose in view and the points to which it is proposed to direct special attention are shown in the following circular, which has been sent to fully 650 physicians throughout the State:

1811 Spruce Street, Philadelphia.

Dear Doctor: At the meeting of the American Climatological Society to be held in Philadelphia in May, 1886, I propose to deliver the Presidential Address on "The Causes and Distribution of Consumption in Pennsylvania." I can obtain from the last census the population of each county and the mortality from consumption. I am having prepared elaborate maps showing the peculiarities of soil and climate of each county. But I need further facts, which can only be obtained from experienced physicians in each township. I have drawn up the following questions, which appear to cover the points of chief importance. They are arranged so that in many cases an answer may be given by underscoring a word or by a monosyllable; but, though aware of the labor involved, I beg you to co-operate in this investigation by affording the fullest information possible.

Detailed statements of instances of special mortality in families or localities will be highly valuable. A sketch, even though rough, of the local conditions in the latter cases would be of great service.

The great clinical, sanitary, and industrial importance of this investigation will, I trust, justify this appeal for your prompt and cordial co-operation. It may be added that full acknowledgment will be made of all such kind assistance.

Yours respectfully,
William Pepper.

1. Name of town, and population (stating year)?
2. Height above sea level?
3. Location of town—(exposed, sheltered, warm, cold)?
4. What winds—north, south, east, or west—most prevalent?
5. What is the atmosphere generally—(cool, warm, dry, damp; do fogs occur)?
6. Annual amount of rain—(number of inches, great, small, medium)?
7. Annual amount of snow—(great, small, medium)?
8. Is there much shade from woods about the town; through the streets? Has it been necessary to cut down trees for health?
9. Soil—(geological structure, sewers, ponds, bays, meadows, marshes, hills, valleys)?
10. Cultivation of soil—(very rich, good, medium, poor)?
11. What winds are most troublesome to consumptive patients?
12. Is the town specially liable to sudden changes from heat to cold; and is there any marked difference between the temperature at noon and at night?
13. Employment of the citizens in general—farming, factories, mining, lumbering, etc.?
14. Nationality of the citizens—(American descent for several generations, German, Irish, Jews, Negroes, other nationalities)?
15. Is consumption prevalent or rare?
16. Is any part of the town peculiarly liable to the prevalence of consumption?
17. If so, what are the peculiarities of the spot or district?
18. Are there any individual houses where consumption has been specially frequent? If so, is there hereditary influence? And what are the conditions of the house as to dryness, dampness, amount of shade, etc.?
19. Is consumption specially prevalent or specially rare among any class or any race—specially Americans, Jews, Negroes—or any occupation?
20. Does consumption run an acute or chronic course in your cases?
21. Do you know of any cases of incipient consumption apparently cured by coming to or by going from your town or district (and, if so, what were the differences of the spots)?
22. Is consumption, as you see it, caused or promoted by hereditary influences (and in what percentage of cases)?
23. Can consumption be apparently prevented from occurring in children so hereditarily disposed, and by what means?
24. Have you any evidence in support of or against the contagious or infectious character of consumption?
25. Is malaria prevalent in your town? If so, is consumption specially prevalent in the malarial districts?
26. Is rheumatism prevalent in your town?
27. Is pneumonia prevalent in your town?
28. Is Bright's disease prevalent in your town?

The following resolutions were adopted by the State Board of Health and Vital Statistics of the Commonwealth of Pennsylvania, at a regular meeting held at Harrisburg, November 11, 1885:

Resolved, That this Board has learned with deep interest of the methodical and searching investigation into the territorial distribution of consumption in this State, now being prosecuted by Professor William Pepper; believing that it will not only add to our general knowledge of the causes of this most widespread and fatal of all diseases, but that it may also result in the discovery of regions of comparative exemption from its ravages within our own borders.

Resolved, That this Board bespeaks the cordial co-operation of physicians throughout the State in making this effort fruitful of results.

Resolved, That Professor Pepper be requested to put his deductions into such shape that the Board may be able to utilize them for the public good in its annual report.

It will be seen that the above questions aim at securing information about the general climatic topographical and geological relations of consumption, and especially about the influence of different local conditions rendering or tending to render the disease peculiarly rare or peculiarly prevalent; about the relations of occupation, race, and heredity to the occurrence and course of consumption and some other diseases as regards the above local and general causes. Considering the amount of time and labor required to answer carefully, even in the briefest manner, so many questions as the above circular contains, I feel that the fact of having received 120 replies representing 47 counties, many of them of elaborate character, is ample proof of the interest felt by the profession in this investigation, and calls for the warm expression of my thanks, which I now beg to make to all of my correspondents. In addition to the material thus placed at my disposal, I have made liberal use of the mortality and vital statistics as prepared by Dr. John S. Billings for the census of 1880. Nor can I neglect this opportunity of referring to the great practical value of this colossal work. Despite the serious defects of the statistics resulting from the absence of any national system of registration of vital statistics such as is relied upon by all other civilized nations for the purpose of ascertaining the actual movement of population, the improved method employed in this tenth census and the ability shown by Dr. Billings in the arrangement and analysis of the results render the two volumes which have just appeared highly valuable to the profession and highly creditable to the genius and energy of their distinguished author. So far as concerns Pennsylvania, Dr. Billings's statistics are based upon 2,342 returns out of 4,661 registers of death sent to different physicians in this State.

I have also used all available published mortality returns in Pennsylvania, but it is a striking fact that there are none such provided save in Philadelphia and Pittsburgh.

With these data, and using Professor Lesley's topographical map as a basis, Dr. Guy Hinsdale, to whose intelligent and energetic co-operation this report largely owes its existence, has prepared for us maps showing the prevalence of consumption in Pennsylvania counties, and the relations between such prevalence and elevation, and mean annual temperature and rain-fall. It gives me pleasure also to acknowledge the kind co-operation of Dr. Hare in the collection and collation of material for this study.

As is doubtless known to you, the unit of locality used in the tenth census is the county; but, as it was impossible to give full statistics of the 2,605 counties in the United States, it was decided to give for the county only the total mortality at certain groups of ages and the number of deaths from a few diseases of special interest, and to do this only for counties having a population of 10,000 or upward. The more elaborate compilations were made for groups of counties within the limits of each State, which are called State groups. These groups were selected by Mr. Henry Gannett, the geographer of the census.

The State groups of counties can evidently be consolidated by States, or they can be combined into what the census calls grand groups, whose boundaries are determined by topographical peculiarities and not by State lines. Of these grand groups there are no less than twenty-one recognized in the tenth census, in only two of which—viz., No. 6, the central Appalachian region, and No. 8, the interior plateau—does Pennsylvania appear, the important city of Scranton being in the former group, while in the latter the cities of Philadelphia, Pittsburgh, Allegheny City, and Reading are included. The counties of Pennsylvania are divided in the census into two groups, the first of which contains thirty-nine, viz.:

Adams, Bedford, Blair, Bradford, Cambria, Carbon, Centre, Clearfield, Clinton, Columbia, Cumberland, Dauphin, Fayette, Franklin, Fulton, Huntingdon, Indiana, Juniata, Lackawanna, Lebanon, Luzerne, Lycoming, Mifflin, Monroe, Montour, Northumberland, Perry, Pike, Schuylkill, Snyder. Somerset, Sullivan, Susquehanna, Tioga, Union, Wayne, Westmoreland, and Wyoming.

And the second twenty-eight, viz.:

Allegheny, Armstrong, Beaver, Berks, Bucks, Butler, Chester, Clarion, Crawford, Delaware, Elk, Erie, Forest, Greene, Jefferson, Lancaster, Lawrence, Lehigh, McKean, Mercer, Montgomery, Northampton, Philadelphia, Potter, Venango, Warren, Washington, and York.

In the preparation of Map No. 1 it has been found desirable for the purposes of demonstration to divide these counties differently, and to make four groups, as follows:

Group I (Less than 500 Persons Living to One Death from Phthisis).—Berks, Bucks, Chester, Erie, Franklin, Fulton, Lehigh, Mifflin, Philadelphia, and Washington.

Group II (Between 500 and 750).—Adams, Allegheny, Armstrong, Beaver, Bedford, Bradford, Butler, Cambria, Carbon, Centre, Columbia, Crawford, Cumberland, Dauphin, Delaware, Fayette, Greene, Huntingdon, Jefferson, Juniata, Lackawanna, Lancaster, Lawrence, Lebanon, Mercer, Monroe, Montgomery, Northampton, Schuylkill, Snyder, Susquehanna, Venango, and Wyoming.

Group III (750 to 1,000).—Blair, Clearfield, Clinton, Indiana, Luzerne, Lycoming, Northumberland, Perry, Somerset, Tioga, Warren, Wayne, Westmoreland, and York.

Group IV (Over 1,000).—Cameron, Clarion, Elk, Forest, McKean, Montour, Pike, Potter, Sullivan, and Union.

Group No. 1 embraces those areas where there are less than 500 persons living for one annual death from consumption.

Group No. 2 embraces those areas where there are between 500 and 750 persons living for one annual death from phthisis.

Group No. 3 embraces those areas where there are 750 to 1,000 persons living for one annual death from phthisis.

Group No. 4 embraces those areas where there are over 1,000 persons living for one annual death from phthisis.

The same information which is displayed in this map by means of different degrees of shading is shown in tabulated form (see Table No. 2), with the addition of information as to the total population, the total death-rate per thousand, the number of persons to one square mile, and the number of square miles, the general character of the occupation of the population, and the mortality from malarial fever and pneumonia.

In considering the mortality from consumption, as shown by this table, it will be seen that there is not any striking disparity between that of the census group No. 1, which gives a rate per thousand of 14·9, and that of No. 2, which gives a rate of 13·2. This is noteworthy, since in the latter group the total population was 2,344,089, of which only 96,881 were living in the cities of Scranton, Pa. (45,850), and Paterson, N. J. (51,031), while in the interior plateau group, with a population of 5,714,683, and containing no less than 1,388,416 residents in cities (Philadelphia, 847,170; Pittsburgh, 156,389; Allegheny, 78,682; Reading, 43,278; and in cities out of Pennsylvania, 262,897), the rate of death from consumption per 1,000 population was only 14·9.

Equally remarkable is the composition of our first group of counties where there are less than 500 persons living to one annual death from phthisis, since it contains Philadelphia, with 129 square miles, and 6,567 inhabitants to the square mile.

Group 1.			Group 4.		
	Sq. mile	Persons per sq. m.		Sq. mile	Persons per sq. m.
Philadelphia....	129	6,567	Clarion	570	71
Lehigh.........	360	183	McKean........	1,000	42
Berks..........	900	125	Union	310	35
Bucks	590	116	Montour	600	33
Chester........	760	110	Sullivan........	430	19
Erie...........	770	71	Elk	770	18
Franklin	760	66	Pike..........	600	16
Washington	890	61	Cameron.......	400	14
Mifflin	380	52	Potter...	1,070	13
Fulton.........	440	23	Forest.........	376	12

It is true that in Group 4, which comprises the counties with the lowest mortality from phthisis, and which we have placed by the side of Group No. 1 for comparison, the population is in every county very sparse; yet it seems evident that mere density of population has not a powerful influence in this question. The high general death-rate in Philadelphia, 20·4 per thousand, is certainly attributable in large part to other causes. However, it will be observed that all of the counties with high mortality from consumption have very little elevation, and, further, are seated in the areas of largest annual rain-fall. This remark is not applicable to Washington County, the returns from which are so much at variance with the others as to suggest inaccuracy.*

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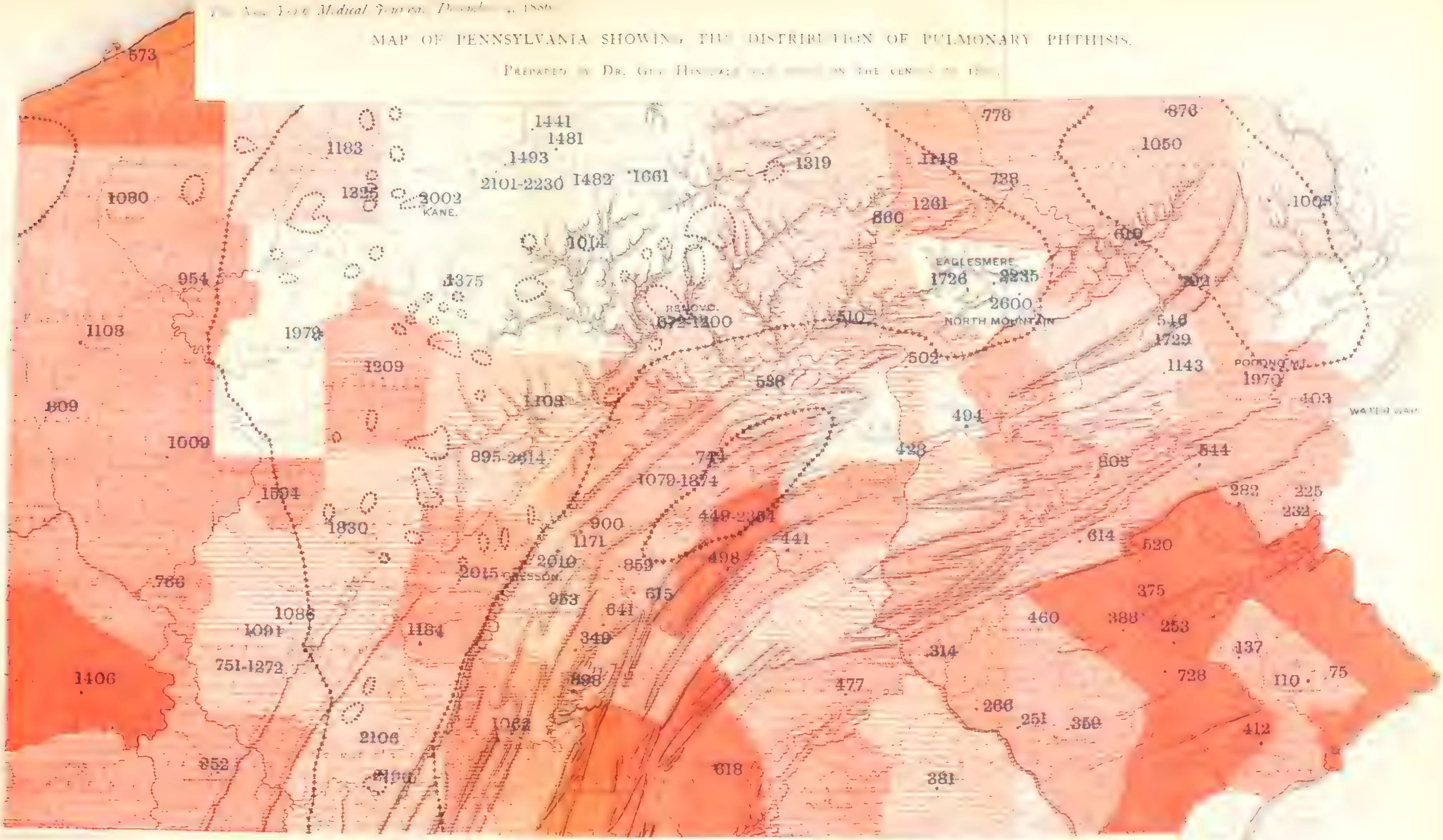
* As further evidence of probable inaccuracy in the returns from this county, it may be stated that the statistics from the Surgeon-Gen-

The New York Medical Journal, December 4, 1886.

MAP OF PENNSYLVANIA SHOWING THE DISTRIBUTION OF PULMONARY PHTHISIS.

PREPARED BY DR. GUY HINSDALE AND BASED ON THE CENSUS OF 1880.



The base of this map is taken from [illegible] of Pennsylvania [illegible]

- 🟥 Less than 500 persons living to 1 death from Phthisis.
- 🟥 Between 500 and 750 persons living to 1 death from Phthisis.
- Between 750 and 1000 persons living to 1 death from Phthisis.
- Over 1000 persons living to 1 death from Phthisis.

++++ Areas of [illegible]

••••• Area of [illegible]

Figures in [illegible]

It may be noted that in Erie County, which has considerable average elevation, the mortality may be influenced by the proximity of the lake, and by the presence of a considerable body of low, wet land.

Having alluded to the possible influence of rain-fall, it is proper to call attention to Map No. 2,* which shows the general distribution of mean elevation and of mean annual rain-fall in Pennsylvania. The figures in black indicate the general elevation of the irregular areas in which they are placed, and which are further distinguished by the varied shading. Of course, in a State of such large dimensions and of such diversified surface as this, there are points in every county which depart widely from the general average here given; but, notwithstanding, it will be found that the data of this map accord quite closely with the most important facts, and give a good general impression of the characters of the different districts.

It will be observed at once that those portions of the State where phthisis is rarest are the most elevated, having a general altitude of 1,500 to 2,000, or, better still, of 2,000 to 3,000 feet; while, in proportion as we enter districts of lower general altitude, we find correspondingly increasing rates of mortality from consumption. In explanation of the lines indicating mean annual rain-fall, it must be said that the small area above the isohyetal line of 35″ yields an annual precipitation of from 30″ to 35″; the area between the line of 35″ and that of 40″, comprising about two thirds of the entire State, gives a mean annual rain-fall of from 35 to 40 inches, and the area below the line of 40 inches an average annual rain-fall of from 40″ to 45″. In the area of maximum rain-fall will also be found Erie County, where the average for a series of years has been 42 inches. Some general correspondence will also be noted between these areas of rain-fall and the areas of varying mortality from consumption, the higher figures among the latter coinciding with areas of greater precipitation.

It will be seen farther on, in the more minute study we have been able to make of Philadelphia, that the influence of elevation and of density of population appears to be considerable, and in accordance with what we have above stated. Before leaving the consideration of the general physical features of the State, attention may be called to the areas on Map No. 1, inclosed respectively by lines of black dots or of small crosses, the former of which indicate areas of standing pine, and the latter areas of standing hemlock. Unfortunately, the destruction of our timber has been so unscientific and wanton that the statement of the actually existing forestration in this as in many other States has little value from a climatic and medical standpoint, and is of only commercial interest. It is probably near the truth to say that the areas of standing hemlock represent what would have been areas of pine but for the wholesale destruction of the latter. It will be seen that these great areas correspond quite closely, for the most part, with those of the most favorable climatic conditions, and the greatest immunity from consumption.

Opportunity has been taken to place on Map No. 1 a few of the well-known health resorts of Pennsylvania, such as Pocono, North Mountain, Eaglesmere, Renovo, Kane, and Cresson. The elevation of these and similar points which might be named is considerable—from Renovo, where the hotel actually stands about 1,200 feet above sea-level, to North Mountain, 2,600 feet. The natural beauties and advantages of these points are unsurpassed, and nothing is required but a clearer appreciation of their excellenc as sanitary stations and better facilities of access and accommodations for visitors to render them as attractive and valuable as any health resorts on this continent.

As would be expected, the study of the isotherms yields results closely corresponding with those already stated as to elevation and rain-fall; and, as the influence of the mean annual temperature may be regarded as only incidental where it presents such limited variations as exist here, it is sufficient to call attention to Map No. 3, in which the isotherms and the respective areas they include are shown so as to be easily studied in connection with the facts given in the other maps.

Turning now from this general survey of the mortality statistics and climatic conditions of Pennsylvania, the more important question arises whether the data at our disposal indicate marked differences in the distribution or prevalence of consumption in areas much smaller than the counties, and whether, if so, any connection can be traced between such varying degrees of prevalence and any definite local causes or conditions. I had originally thought of preparing a map showing the geological features of the State to be studied with the other maps already described. But, as Professor Lesley pointed out to me, all the main geological formations lie at such a depth below the surface that it can not be supposed they produce any material effect upon those living above them; and, on the other hand, the surface conditions are so numerous and diverse that it would be impossible to portray them even for a much smaller area than the one we are considering. It will be observed that the list of questions sent to physicians throughout the State included several which were framed with the special object of securing information as to local conditions which might thus affect the frequency and cause of consumption. Dr. Bowditch attributed the result of his investigation entirely to the presence in his circular of two questions suggested by Dr. John Ware, namely: "Is any portion of your town peculiarly liable to the prevalence of consumption?" and "If so, what, if any, are the peculiarities of the spot?" It will be seen that in my circular, which was prepared after consultation with Dr. Bowditch, I included these same two questions (see 16 and 17); and others were inserted in the hope of eliciting information of this special and definite character.

Let us now turn to a detailed study of the 120 answers which have been received, for which purpose they have been carefully tabulated under the heading of each question, and, further, an abstract of the answers from each county has been prepared, which is given in the appendix.

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eral's office show ninety-two deaths from consumption among females, and only forty among males.

* Maps No. 2 and No. 3 are necessarily omitted from the Journal, but will appear in the volume of "Transactions of the American Climatological Association."

As the point of special interest in the investigation is most directly touched upon by Questions 15 to 19, inclusive, the result of the answers to these will first be considered. In response to the question, "Is consumption prevalent or rare?" there are 112 replies, of which 64 state that the disease is rare or very rare, 37 that it is prevalent, and 11 that it is moderately prevalent.

From the counties making Group No. 1, excluding Philadelphia, which will be separately discussed, there are 21 replies, of which 14 state that the disease is rare and 7 that it is prevalent. Yet it will be noted that these replies are all from counties which give the highest mortality from phthisis—a fact which shows conclusively how wholly insufficient are the data at my disposal for enabling me to draw any general conclusions. From the counties making Group No. 4, the general statistics of which show an annual mortality from phthisis of more than a thousand living, I have been able to secure only four replies, one of which states that the disease is prevalent, one that it is moderately prevalent, one that it is rare, and one that it is very rare.

In regard to Question No. 16, "Is any part of the town liable to the prevalence of consumption?" I have received 109 replies, of which 86 are negative and 8 affirmative. The first of these affirmative answers is from Dr. George F. Horton, of Terrytown, Bradford County, who states that, although the disease is rare and 50 per cent. of the cases are due to heredity, it is comparatively frequent in that part of the town which is situated on the river and where malaria also is prevalent.

A second affirmative answer is from Dr. H. A. Arnold, of Merion Square, Montgomery County, who states that, although consumption is seldom met with and 75 per cent. of the cases are hereditary, there is one house in the hollow where three cases of consumption occurred within a short time. The special characters of this house will be considered shortly.

The third affirmative answer refers to South Bethlehem, with a population of 5,000 inhabitants, at an elevation of 400 feet. Consumption is not markedly prevalent, but a certain part of the town on made ground, lying low near a brook, which acts as an open sewer, is thought to be associated with the prevalence of the disease. It can not be said that any individual houses have been specially the seats of this disease.

The fourth affirmative answer is from Dr. H. H. Bordner, of Shamokin Dam, Snyder County, which is a small village of 300 inhabitants at an elevation of 800 feet. Low and swampy areas are associated with phthisis; so also are certain damp houses. Consumption is especially prevalent in malarial districts.

The fifth affirmative answer is from Dr. W. T. Bailey, of Dillsburg, York County, who says that while consumption is rare in this town, with a population of 500 and an elevation of 1,065 feet, there is a central part of the town where it is frequent. All of the houses in that area have damp cellars and yards.

The sixth affirmative reply is from Dr. J. C. Gable, of York, York County, who says that consumption is prevalent in the damp portions of the town, where the houses are all more or less damp.

The seventh affirmative reply is from Dr. T. J. Ward, of Ridgway, Elk County, a town of 2,000 inhabitants, with an elevation of 1,437 feet. Consumption is moderately frequent, but nearly all the cases have occurred in the neighborhood of a tannery on the north side of the town near the Elk Creek.

Dr. R. Leonard, of Mauch Chunk, Carbon County, in a communication received too late to embody in the tables, says: "The mountain is so steep and high on the street as to put the dwellings on that side in the shade. At one point there are about twenty dwellings upon which the sun never shines for three months of the late fall and early winter. It is here that consumption especially prevails. There is a marked difference in the number of cases on the north and on the south sides of the street, the south side giving the greater number. The Second Ward, situated upon a bluff 200 feet above the First, is open and exposed to all winds. Here consumption is not so prevalent, though pneumonia and rheumatism are frequent."

The statistics obtained from Philadelphia may be taken as an eighth affirmative reply. This city has the largest population, many wards having from 120 to 150 inhabitants to the acre. It varies in elevation from 0 to 440 feet. Consumption is prevalent. A glance at Map No. 4 will show at once those wards having the greatest mortality from phthisis. They are the First, Second, Third, Fourth, Fifth, Seventh, Eighth, Ninth, Sixteenth, Seventeenth, Eighteenth, Twenty-seventh, Twenty-ninth, and Thirtieth. A study of this chart will also show that these wards are in general characterized by a low elevation, greater density of population, and, on reference to the chart of water-supply, water of inferior quality.

In a communication from Dr. F. F. Davis, of South Oil City, Venango County, occurs the following interesting paragraph bearing on this question:

> "Oil City is built partly on the north side of the river and partly on the south side or left bank. On the north side, part lies low and wet, with insufficient sewerage, and part lies high on a hill—about 150 feet above the river. On the south side one part is on the second bottom of the river, 30 to 35 feet above the river, and has a porous soil underlaid by gravel; part is on the hill, 100 to 200 feet above the river. Consumption is about *as common in one part as another.* I think consumption causes about 20 per cent. of adult deaths. It did the year I kept the record for the Census Bureau."

It will thus be seen that the vast majority of my correspondents deny the existence of any center in their town where consumption is specially prevalent, but that, in a few instances where such special localized prevalence is asserted to exist, the local conditions are those of dampness, bad drainage, and excessive soil moisture, which are generally believed to favor the development of the disease. It is evident, however, that, unless continued inquiries which I hope to make shall elicit additional information at variance with the general tenor of the replies thus far received, it must be conceded that the evidence available does not point to excessive soil moisture as the main causal condition of consumption in this State.

In regard to Question No. 17—"If there are any parts of the town peculiarly liable to consumption, what are the peculiarities of the spot or district?"—there are but seven who reply that they have noticed any such peculiarities, and these speak of damp yards and bad sewers, and low ground by the river-side.

In reply to Question No. 18:

As to any individual house where consumption has been especially frequent, there are ten replies. The evidence of these replies is not, however, entirely concordant. On the one hand, Dr. W. G. Stewart, of Newville, Cumberland County, writes that, in one house, five young persons from ten to seventeen years of age died of consumption. The parents were robust and healthy, and there were no hereditary influences. The house, however, was shaded by large and numerous trees and was damp, with no drainage; water stood in the cellar, and the house was built on what is called "spouty land," and, further, it was not well ventilated. In another house in the same town, with bad ventilation, wet cellar, and no drainage, there was a large family, with hereditary tendency, who died of consumption. Dr. W. D. Bailey, of Dillsburg, York County, in like manner describes a house with several repeated fatal cases of consumption where the local conditions of the house were very unfavorable.

Dr. H. A. Arnold, of Lower Merion, Montgomery County, describes a house in a hollow, fifty yards east of a brass mill, where in three cases, two of them children from fourteen to sixteen years of age without heredity, and one an adult of consumptive family, all ended fatally. The locality was damp, and especially was the air charged with vapor from the melted brass, so that the case is complicated by the possible action of these irritating particles as a cause. In the other instances it is distinctly stated that hereditary influences co-existed.

Dr. William P. Noble, of Upton, Franklin County, writes:

"There is one house in the town in which the members of an entire family have died from consumption, but in this instance there was an hereditary influence, with, perhaps, a local condition favorable to the development of the malady. The house is of stone, well shaded on the north, east, and south, and is cool and damp even in warm and dry weather. The grounds surrounding it, which are ample, are of a damp, marshy character, and occasionally I have noticed gaseous matters escaping from it which were quite perceptible to the smell. The family spoken of consisted of the parents and four daughters. The father died at the age of sixty, the mother at fifty, and the daughters between twenty and thirty. For a number of years I noticed that all the cats kept about the premises took consumption and died of it. The family now living in the house, with the exception of one daughter, has been free from any symptom of the disease. The daughter, eighteen years of age, had several slight hæmorrhages about one year ago, but I am not positive that they were of tubercular origin. She was in pretty fair health in the spring, at which time she went West. I learn that she has been enjoying good health since then."

Dr. J. E. Rigg, of Stonerville, Westmoreland County, writes:

"Mr. and Mrs. Lane came to this township when young, seemed to be very healthy, lived to be quite old, and died without any evidence of lung trouble. Nothing known of their family history. They lived almost entirely in the basement of a stone house, which was damp and very poorly ventilated. In this part of the house they raised six children; all lived to manhood and womanhood. Since then four of the six died of consumption; the other two know nothing of the four who remained here and died of consumption. Two of them married one man of very good family history and he of good health. The man is now suffering from consumption, having lived with the two women in all about thirty years. The children of the four whose history we have (the grandchildren of the old couple, Mr. and Mrs. Lane, some ten in number), all have consumption; some have died, others advanced, and others yet just beginning. Change of climate has been tried with some, but with little benefit.

"Their habits were good; as a rule, little shade about the house. Spring of water just outside the wall of the basement."

In an interesting series of cases which came under my own observation, I had the question of heredity and of local influences studied carefully by Dr. Judson Daland with the following results:

Mrs. Jane Kief Garrity's mother was eighty-three years old when she died after two weeks' illness. Exact cause unknown. Her father was eighty-three years old when he died of kidney disease. They both were vigorous and strong, as were the rest of their immediate family as far as Mrs. Garrity could remember; they all lived and died in Ireland. She has five brothers, who are living and healthy to the best of her knowledge. One sister died in 1879, when fifty years of age, rather suddenly, after four days' illness; the exact cause is unknown, but she had asthma and malaria, and was very anæmic when Dr. Reid saw her. The remaining sister is alive and healthy.

Mrs. Jane Kief Garrity is now fifty-two years old, has always been stout and hearty, and is so yet. She married when about eighteen years old, just one year after she left Ireland; never showed tendency to pulmonary disease. Began menstruating when about thirteen years of age. This function ceased about one year ago.

Mr. Robert Garrity married the above when he was thirty years old; never developed tendency to pulmonary disease; was always well and strong; always a hard worker in a mill, where he was exposed constantly to great extremes of heat and cold; was probably a regular drinker of whisky, though never to excess except in two instances. He occasionally suffered from abdominal (internal?) colic from over-indulgence in cold water when heated. He died in 1871, when fifty years of age, from the effects of a severe burn received at the mill.

His father died when over ninety years of age. He had no special disease. Probably simply died of old age. He was always a hard worker. No lung trouble whatever. His mother died rather suddenly when seventy years of age. Cause unknown. If she had had phthisis, Mrs. G. would have known it.

One brother died early of variola. The remaining two brothers are probably alive and well.

His four sisters are all living and healthy.

Mr. and Mrs. Garrity's Offspring.—1st. One boy was born in Pottsville about 1851, and died, after two days' illness of croup (?), when fifteen months old. All children subsequently were born in an old house on the west shore of the Schuylkill River, in Conshohocken, Pa. They moved to new house, their present home, in 1875–'76.

2d. Boy was born in 1857, lived ten months, and died of summer complaint.

3d. Lizzie was born in 1858 and seemed healthy. No serious illness. Menstruation began late, when eighteen years old. She worked in a woolen mill, the air of which is filled at all times with fibers, dust, etc., but Dr. Reid says the other two hundred girls did not develop pulmonary diseases more frequently than those having other occupations. Her fatal illness lasted about six months. (Age at death, twenty to twenty-two.)

4. Mary was born in 1860. Always rather thin, but never sick. Began menstruating when sixteen or seventeen. Fatal illness began in March, 1882, and terminated (ten months) in January, 1883, in her twenty-second year.

5th. Mary Jane was born about 1863. Was stout and hearty. Menses began when fifteen years old. Began losing flesh before going to the mill, where she remained one year. She died, when twenty-one years old, October 25, 1884, after six months' illness.

6th. Annie was born in 1864. Always well and strong. Worked two years in a mill. Died in December, 1882, when nearly nineteen years old, after six months' illness.

7th. Julia, born in 1866, worked in a mill until two years before her death, which occurred from phthisis in February, 1882, in her sixteenth year, after an illness of eight months.

8th. Robert, born in 1868. Always well and strong; is tall and seems strong. Chest rather poorly developed, shoulders overhang, stoops; pulmonary resonance good everywhere. Now working in an iron mill about as his father did. Now seventeen years old.

9th. Katie, born in 1870, and therefore fifteen years old, always strong and well. Now looks the picture of health and strength. Stout, well developed; menstruates. Chest full, well shaped, and expands well during inspiration.

All of the girls had small waists—so much so as to suggest tight lacing. All the cases began in the same way, with slight hacking cough, irregular fever (partially influenced by ext. cinchonæ fld., or Warburg's tr.), rapid pulse (90–110–120), pains in the chest, which expectoration would increase; only occasional slight attacks of hæmoptysis; profuse night-sweats; and cessation of the menstrual flow. Gastric digestion poor.

The disease would begin at one apex, infiltrate that lung, and then infect the other. Toward the last, cavities would form.

While sick they were carefully nursed and placed in separate rooms, rendering the notion of contagion improbable.

Careful cross-examination failed to associate the beginning of these cases with any direct exciting cause other than the mill.

Dr. Reid believes all the cases were complicated by malaria.

The average duration of the disease was six months, except in Maggie's case, which lasted nine months.

Topography, Hygiene, Drainage, etc.—The house in which the children were born was situated on the west bank, about one hundred feet from the Schuylkill River. The situation is exceedingly bad, all the drainage being on the surface, and emptying into the river. Once or twice a year there would be a freshet, and this particular spot is so situated that the swift current strikes the shore with great force and deposits six or more inches of thick, bad-smelling mud. After each freshet there would be an outbreak of intermittent fever. In this neighborhood there are cases of malaria, more or less, all the time.

The drinking water was obtained from a well, and was poor in quality. The soil is so porous that it would be easy for matter to drain into it.

Twenty families were also exposed to the above unfavorable influences, but pulmonary diseases were no more frequent than elsewhere. They moved to present house about 1868 or 1870.

The house where these cases developed is situated within a few feet of the top of a steep hill, about 600 or 700 feet from the river and 80 to 90 feet above the level of the river. The ground is *dry*, composed chiefly of shale and small, flat pieces of stone. The cellar is perfectly dry and clean. The drainage is all above ground, and the cess-pool is some distance from the house. The rooms are all clean, large, airy, and well ventilated, though all the ceilings are low—about seven and a half feet high.

The drinking water is obtained from a well, and seems to be of good quality. I could find no source of contamination.

This house and its location seem to me to be particularly healthful (excepting the low ceilings).

JUDSON DALAND.

As would be expected, the answers to many of the questions bearing upon points of climate and topography are so varied as to render it impossible to draw any conclusions from them. Thus, in regard to the prevalent winds in those localities where consumption is frequent, it is only when, as in certain locations, the trend of mountain ranges or of rows of high hills, is such as to render towns in the inclosed valleys accessible to the winds which sweep through these valleys from certain quarters, that it can be said that the prevailing direction of the winds has a definite bearing upon the tendency to pulmonary disease.

A glance at Map No. 1 will show that this remark applies to a number of interior counties, as Fulton and Mifflin, which are traversed by parallel mountain ranges, so as to favor this effect of the wind.

Dr. Davis, of Venango County, writes:

> "Our winds are very variable, sometimes blowing from different directions two or three times in a day." "The winds most dreaded by our consumptive patients are, when an east wind has been blowing (or one from the south), the wind suddenly changes to the north, producing a sudden fall of temperature."

(To be continued.)

A SYSTEM OF TERMS RELATING TO THE CONDITIONS OF THE OCULAR MUSCLES KNOWN AS "INSUFFICIENCIES."

By GEORGE T. STEVENS, M.D., Ph. D.,
NEW YORK.

THE relations of the eyes to each other, in the act of vision, exercise important influences, not only in occasioning the condition known as asthenopia, but in the causation of many other important nervous disturbances.

If this statement is admitted, it will be evident that the subject of irregularities in the actions of the ocular muscles must assume a greater importance than when disturbances of equilibrium were regarded as only occasional factors of asthenopia, and when these disturbances were looked for mainly in a single direction, in case they were not entirely disregarded. It is true, even at the present time, that "insufficiency of the interni" is the only disturbance of the ocular muscles, excluding strabismus or some of the results of paralysis, mentioned in the majority of the text-books upon the eye. Indeed, the importance of even this defect is hardly dwelt upon at any considerable length in many of these works, and it is not at all uncommon for the oculist to overlook the condition in his practical work.

Defects which result in lasting difficulties and perplexities in the performance of binocular vision are not to be ignored; and the *rôle* of the ocular muscles in the causation of many nervous disturbances is undoubtedly of very considerable importance.

As the investigator in this department of ophthalmology proceeds in his researches, or attempts to record his observations, he is met by the fact that the terms now in use are not only frequently inaccurate and misleading, but wholly inadequate to describe many of the states observed.

To illustrate the two factors of the proposition just made, a few ordinary conditions may be adduced:

1. The expressions employed to designate the deviations from the state of physiological equilibrium are often incorrect and misleading.

The term "insufficiency of the interni" is used to express a state of the muscles of the eyes which is shown by the equilibrium test of Graefe at reading distance. In this test the images seen by the two eyes are separated by a prism held vertically, with its base exactly up or down before one of the eyes. If, under these circumstances, the images deviate laterally in directions opposite to the two eyes—that is, if the image of the right eye deviates to the left, and of the left eye to the right—there is said to be "insufficiency of the interni" of as many degrees as equals the strength of a prism which, with its base toward the nose, will bring the two images in a vertical line. The expression "insufficiency of the interni" in this relation is used to indicate the fact that the internal recti muscles are "insufficient" to counterbalance the external recti; and it also carries the idea that the externi are, in proportion to their physiological state, stronger than the interni, or that the interni are, proportionally to the others, abnormally weak; tending thereby to balance the eyes outward, so as to cause an unusual and excessive demand upon the internal recti in close work.

The fact that a great many cases, in which the equilibrium test of Graefe shows the conditions described, are really "insufficiency of the externi" and not of the interni, must occur to any careful observer. Such a one will often find that, if he makes his test of equilibrium while the ocular muscles are in a comparative state of repose, as when looking at an object at a distance of six metres or more, he may find very marked "insufficiency of the externi." He may even observe that, if a screen is passed before one of the eyes while the other continues its gaze at the distant object, the covered eye will deviate in a marked manner inward. If the screen is quickly changed to the opposite eye, he will see the lately covered eye move outward in order to fix the object. He may make various other tests which will demonstrate beyond a doubt that the real balance of the eyes is inward, and yet, when he makes the test of the dot and line of Graefe, or any similar test, at near point, he has marked "insufficiency of the interni."

It is manifestly incorrect to say of such a muscular arrangement that the interni are "insufficient," and especially when by such a term it is generally understood that the outer are the stronger of the two opposing sets of muscles.

Again, in certain cases of what is known as "insufficiency of the interni," one of the eyes actually deviates inward while the other deviates outward, while in a still greater number an apparent "insufficiency of the interni" results from irregularities in the superior or inferior recti.

Many other illustrations of the truth that this term as employed is misleading might be cited, but, without further expenditure of time or space, we may pass to the other factor of the proposition.

2. The term "insufficiency" is quite inadequate to express the conditions of deviation from the equilibrium as they may be observed.

Graefe, as one of the great pioneers in modern ophthalmology, and as the greatest authority on the subject of muscular asthenopia, recognized some of these deviations, and not only regarded "insufficiency of the interni" as a condition of notable importance, but wrote also of "insufficiency of the externi."

Notwithstanding his remarkable observations, much remained to be learned in this department of ophthalmology. While Graefe's great authority is to be fully recognized, the knowledge of these important conditions may yet be greatly extended.

A class of deviations not at all uncommon, and one which induces great nervous perplexity, is that in which the tendency is for the visual line of one eye to deviate above that of the other.

In examining some thousands of cases of "insufficiencies" I have found a very important proportion of such tendencies. There is no term now in use which definitely expresses this condition. We can not say that it is insufficiency of one or other superior or inferior rectus, for it is, in the great majority of cases, impossible to determine through what special influence the equilibrium is lost. We have not here, as in paralysis of the muscles, the definite guides of restricted motions by which we may determine the exact location of the trouble. Indeed, the defect may include an inclination on the part of the one eye to deviate upward, and on the part of the other to deviate downward. We might, perhaps, call such a condition "insufficiency in a vertical direction," with the right (or left) line of vision inclined to deviate upward.

This would be a descriptive and somewhat extended expression. It would still be inaccurate, for it implies a weakness of some muscle, when the actual state may be an excess of tension on the part of some other muscle.

Again, there may and often does exist a combination of faulty tendencies in more than one direction. The eyes may incline to deviate in both the vertical and the horizontal planes, the result of which will be a tending of the visual lines to deviate in an oblique manner. It must be apparent that the term "insufficiency" is inadequate to express all these tendencies.

There may be some propriety in using the expression "insufficiency of the interni" in many cases, but in these just cited it would be impossible for us to speak of insufficiency of this or that oblique muscle without more accurate information than we are likely to possess. Indeed, in the majority of cases these muscles may not be influential factors in the condition described.

Some term better adapted to express just what is intended, and nothing more, is needed. It is after much hesitation and doubt whether a suggestion involving the use of new terms in connection with a subject which has already engaged the attention of many able investigators might not be regarded as needless and presumptuous, that I have ventured to propose such an innovation. If, however, a change is to be made at any time in the classification and nomenclature of these defects, such change should be made before the literature becomes still more extended.

The first need in a scientific classification of these muscular defects is the possession of such terms as, with proper modifications, shall justly express the conditions described.

The terms which have already been employed are all unsatisfactory, and are not uniformly employed by different writers to describe precisely similar conditions. No terms now in common use occur to me as being in all respects desirable.

We may, therefore, select some word which shall convey the general idea and which, with its proper modifications, will express our meaning with specific variations. Such a term should not, like the word "insufficiency," attempt to describe the exact nature of the muscular conditions, for this is often, if not generally, a subject of uncertainty. It should rather indicate the resultant facts as shown by the tendency of the visual lines to deviate from the physiological equilibrium. Nor should the term convey the idea of an actual turning, or deviation of one of the visual lines from what should be the common point of fixation. It should express a *tendency* to such deviation of such character that, should the force of the will be removed, this actual turning would result.

The visual lines, in the conditions under consideration, are held in such relations to each other as to permit of more or less perfect binocular vision, but at an expense of a certain excess of nervous effort. In this we have the distinction between these conditions and those known as strabismus; for, while in these there is habitual binocular vision, in strabismus there is habitual diplopia, either conscious or unconscious. It is true that a fusion of images is possible in many cases of strabismus, and that slight diplopia may become to a certain degree a habit, in the conditions under consideration. Nevertheless, a condition of habitual diplopia should in general be regarded as distinguishing strabismus from these conditions.

The Greek word φόρος (*a tending*) seems to fulfill the conditions required, and accurately expresses our meaning in regard to this class of defects. With this for our central idea we may easily express every variety of tendency to deviation, as well as the absence of such tendency. Thus the two generic terms *orthophoria* (ὀρθός, right, φόρος, a tending) and *heterophoria* (ἕτερος, different) would express respectively a tendency straight forward and a tendency in some other direction.[1]

In order that these terms should possess precise signification, the relation of the visual lines to which they are applied should be determined under the uniform conditions which are here given.

The eyes should be directed toward an object situated at a given distance from them, and the head should be in the position known as the "natural" or "primary" position. The most convenient distance for the object is that at which tests for refraction are commonly made; that is, twenty feet, or six metres. This distance is, therefore, chosen as the standard for the determination of orthophoria and heterophoria. The best object for use in these determinations is a lighted candle against a dark background. It should be on a level with the eyes and at a distance of twenty feet. If ametropia exists, the eyes should be supplied with suitable correcting glasses. In the "natural position" the body and head are erect, the eyes are in the same horizontal plane, and the median line (a horizontal line at right angles with the line connecting the two eyes) is directed exactly toward the object. Under these circumstances there should be in orthophoria the minimum of muscular innervation.

These conditions being observed, we may ascertain the existence of muscular equilibrium or its absence by means of prisms in the manner familiar to all oculists.

The determination of the muscular conditions at near points will occupy our attention as we proceed. It is to be remembered that the results in such examinations are by no means absolute. Heterophoria may, like hypermetropia, be partly or entirely latent. Indeed, as in actual hypermetropia we sometimes have apparent myopia, so with an actual inward tendency an apparent outward tendency may be observed.

The different relations of the visual lines which may be now found may be defined and arranged as follows, a state of the most complete relaxation of muscular effort attainable being always supposed:

I. *Generic Terms.*—*Orthophoria:* A tending of the visual lines in parallelism. *Heterophoria:* A tending of these lines in some other way.

II. *Specific Terms.* — Heterophoria may be divided into:

1. *Esophoria:* A tending of the visual lines inward.
2. *Exophoria:* A tending of the lines outward.
3. *Hyperphoria* (right or left): A tending of the right or left visual line in a direction above its fellow.

This term does not imply that the line to which it is referred is too high, but that it is higher than the other, without indicating which may be at fault.

III. *Compound Terms.*—Tendencies in oblique directions may be expressed as *hyperesophoria*, a tending upward and inward; or *hyperexophoria*, a tending upward and outward. The designation "right" or "left" must be applied to these terms.

In recording the respective elements of such compound expressions I have employed the sign ∟. For example, if it is desired to indicate that the right visual line tends above its fellow 3°, and that there is a tending inward of 4°, the facts are noted thus: *Right hyperesophoria*, 3° ∟ 4°.

In the absence of any means of producing a uniform state of relaxation of the long ocular muscles, such as we possess in atropine for the ciliary muscles, we must resort to every known device to ascertain as nearly as possible the true relations of the muscles. Methods other than that of measuring the deviation when diplopia is produced should, however, be regarded as auxiliary, and the record of ortho- or heterophoria should be made from the diplopia test.

The powers of the different pairs of muscles to overcome prisms should next be determined. Some confusion has existed in the use of terms to express this power. Thus, the words *adduction* and *abduction* have been employed by Graefe and succeeding writers to express the power of the eyes to overcome respectively a prism with its base out or in. They have, however, been employed to express this power both when the object of fixation has been at a considerable distance and when at the ordinary reading distance.

The same words are also used to express the limits of excursion of the eyes outward or inward in the act of fixation.

The words convergence and divergence have similarly been employed to express different classes of phenomena. As the words abduction and adduction are necessary to express the power of moving outward and inward of either eye singly, and as the terms convergence and divergence must in all cases imply the approach or the separation of the axes of the two eyes, whether in the act of overcoming a prism or otherwise, there might be an advantage in employing the word *convergence* to indicate the highest degree of power of blending images at a distance of twenty feet when a prism with its base out is interposed; and the term *divergence* to indicate the limit of power to overcome a prism with its base in. This latter would also be less liable to objection for the reason that, while each eye is habitually directed in abduction and adduction, the two are rarely by voluntary effort caused to diverge except by the influence of a prism. The fact, however, that Graefe in his classic treatise on muscular asthenopia employed the words abduction and adduction to indicate the ability to overcome prisms must, beyond a doubt, determine the point, and these words should, therefore, represent the diverging and converging power with prisms. The standard of distance should, however, be uniform with that for the test for ortho- and heterophoria.

It often happens that images can be united when a prism is placed before an eye with its base up or down, but that diplopia is produced if the prism is reversed, or if it is placed in the first position before the other eye. In other words, the tendency of one visual line being higher than the other, the power to blend images is greater when the prism is placed in one than when placed in the opposite direction.

This condition is one of great importance, and no examination of muscular equilibrium should be regarded as complete in which its presence or absence is not determined. The ability to overcome a prism with its base down may be called *sursumduction*, and the eye before which the prism is placed is indicated by the word "right" or "left."

It remains to consider the relations of the muscles when the eyes are directed to objects at the usual reading distance.

These relations may be uniform with those manifested at a distance, or they may vary in degree or in the direction of greatest apparent energy. To these conditions it might at first appear best to apply the familiar terms "insufficiency of the interni" or "externi."

The objections are that the terms have already been employed to express the relations of the eyes in accommodation and also in repose, and that only two of many conditions can be described.

The relations of the visual lines in accommodation do not always depend upon the comparative strength or weakness of the opposing muscles, but upon a peculiar state of innervation of the muscles.

The habit of maintaining an excessive tension upon the outer muscles in order to overcome esophoria frequently manifests itself in the near test as "insufficiency of the interni."

These considerations render it desirable that a uniformity in the descriptive terms for the near and distant tests should be maintained. The terms already employed for distance may, therefore, be properly used if the modifying phrase "in accommodation" is added. Thus we should have for insufficiency of the interni *exophoria in accommodation*, etc.

The relations of the ocular muscles should, as Graefe has shown, occupy a prominent place in the record of all examinations of the eyes for asthenopia or kindred troubles.

If the system of words here introduced at first appears to be superfluous and therefore unnecessary, a careful consideration of the subject will be likely to convince a candid observer that new and more definite terms are needed to convey uniform meanings, and to express more conditions than are described by terms now in use. The terms here proposed are explicit in meaning, and the system, by arranging the various deviating tendencies into classes, suggests to the examiner the conditions concerning which he should inform himself.

GENERAL ANÆSTHESIA

MODIFIED BY THE

PRECEDING ADMINISTRATION OF NARCOTICS.

By J. C. REEVE, M. D.,
DAYTON, OHIO.

This Journal of November 13th contains an article on "Anæsthetics and General Anæsthesia," by Dr. Edward N. Liell, in which modification of the anæsthetic process by hypodermic injection of narcotics is most curtly disposed of, and a very positive opinion expressed that the process is a dangerous one. A confession of want of acquaintance with this procedure accompanies this expression of opinion, and therefore renders it harmless to those who have had experience with it. But for the benefit of those who, by that article, may be prevented from resorting to what I believe to be one of our most valuable resources, I would briefly present something of what may be said in favor of the method, even at the risk of repeating what has been frequently laid before the profession before.*

In the article above alluded to neither is the process correctly named or correctly described, nor is its origin fairly stated. "Mixed anæsthesia" is the correct name, not "mixed narcosis," and this term was first definitely used by Bernard,† who placed the process upon a scientific basis. While Pitha (1861) and Nussbaum (1863) had used narcotics in conjunction with chloroform, the eminent French physiologist investigated this plan by experiment, and extended and promulgated knowledge of it. He also recognized its advantages in a diminished mortality among the animals he anæsthetized for physiological experiment, and in the fact that he was able to tie the lingual artery of the dog, deep in the throat, under the combined action of chloroform and morphine, while he could not perform the operation with either alone.

Again, the process does not consist in giving "a hypodermic injection of half a grain of morphine, and *immediately* thereafter administering chloroform." If it did, the danger would be undoubted. As it is now practiced, "mixed anæsthesia" consists in the hypodermic injection of about a quarter of a grain of morphine together with atropine at an interval of fifteen or twenty minutes before beginning the administration of the anæsthetic. That there shall be an interval of this length of time is believed to be an essential feature. To be precise, I constantly use from six to eight minims of a solution which contains sixteen grains of morphine and half a grain of atropine to the ounce of water not less than fifteen minutes before proceeding to anæsthetize.

Having stated the process clearly, let us see what can be said in its favor. Theoretically, there are two prominent points, both very strongly favoring increased safety under the anæsthetic process. These are, first, the modifying influence of morphine upon the reflexes; second, the powerfully stimulating influence of atropine upon respiration and cardiac action. These need no labored presentation; they are the plainest doctrines of every treatise on physiological therapeutics. Nor is it necessary here to show how frequently death under anæsthetics occurs by reflex influence upon the heart's action, or by failure of either the respiratory or cardiac function. Remove these modes of death, and by far the major part of the mortality would be abolished.

Clinically, the following points may be presented in favor of mixed anæsthesia:

1. Emotional excitement is allayed. The record of deaths under anæsthetics contains undoubted instances in which the fatal result was solely caused by psychical influences. There can be no question that emotion—dread of the inhalation—is a source of danger. Under "mixed anæsthesia" the nervous system is soothed, the patient already inclining to sleep when inhalation begins.

2. Anæsthesia is much more readily produced, and is also maintained more steadily. A much smaller quantity of the anæsthetic is required, a point of no small importance in prolonged operations and in regard to the duration of after-effects.

3. The period of excitement is moderated and shortened. Every one who has studied the deaths under anæsthetics must have been struck by the frequency with which death has taken place during this period.

4. Absolute quiet of the patient is secured. I have yet to see a patient move a limb, scarcely ever a muscle, during prolonged and severe operations, such as ovariotomy.

5. Last, but by no means insignificant, is a quieter and more painless stage of recovery. Vomiting is certainly not increased; I believe it to be less frequent and severe under this method. After the operation the patient usually passes several hours in quiet slumber, almost entirely free from suffering.

These are the most prominent points observed by me repeatedly during the last fifteen years, during which period I have constantly resorted to this process for all prolonged or severe operations, the anæsthetic used being the well-known A-C-E mixture. Many medical and surgical men of my acquaintance habitually resort to "mixed anæsthesia," and, further, I believe that it is quite generally used—far too generally to be dismissed with the brief notice accorded it by the writer of the article alluded to. Strong testimony in its favor has been given by Mollow, of Moscow,* and by Kappeler.† But strongest of all is the clinical experience published by Brinon, ‡ which contains series of comparative observations of the method contrasted with the use of chloroform alone, and results noted as to amount of anæsthetic used, amount of vomiting, etc.

I will briefly present one comparative observation of my own. It has happened to me but three times to see dangerous symptoms under the A-C-E mixture, and this was one of them. It occurred during the present year. The patient was an inmate of St. Elizabeth's Hospital, a man of about forty, and the operation was for disease of bone about the ankle joint. I administered the anæsthetic, no preceding hypodermic injection having been given. The struggling stage was somewhat more marked than usual, but he was carried through it, and the operation had been in progress some time, when all at once respiration ceased and examination failed to detect pulse or action of the heart. His head was immediately lowered and his tongue drawn out. There being no response, he was replaced on the table and artificial respiration commenced. After a while inspiration occurred and he was restored—to the great relief of all concerned. It was a narrow escape. About six weeks afterward a repetition of the operation was necessary. I had so much confidence in the favorable influence of a preceding hypodermic injection that I undertook the anæsthetic process without any more than ordinary anxiety. Under the combined influence he went off with less struggling than before, and passed through the operation without the slightest unfavorable symptom.

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* "Amer. Jour. of the Med. Sci.," April, 1876. "Trans. of the Ohio State Med. Soc.," 1879. Holmes's "System of Surgery," Amer. ed., Art. "Chloroform." Wood's "Reference Handbook of the Med. Sciences," Art. "Anæsthetics."

† "Leçons sur les anesthésiques et sur l'asphyxie," Paris, 1875.

* "Nouveau dict. de méd. et de chir. prat.," t. xxiv, Art. "Opium."

† "Anæsthetica," "Deutsche Chirurgie," Lief. xx. Stuttgart, 1880.

‡ "Recherches sur l'anesthésie obtenue par l'action combinée de la morphine et du chloroforme," Paris, 1878.

The opportunity for such a comparison does not often occur. The different results of such a case may be differently explained to the self-satisfaction of different individuals. Those who witnessed them can not fail to have their confidence in the measure increased.

Finally, looking back over a career of some considerable length of years in the practice of medicine, if asked to point out the one thing which, above all others, had given me satisfaction, by which I had rendered the most unmistakable benefit to patients, which had never once disappointed me, nor given me cause to regret resorting to it, I should state it to be the hypodermic administration of morphine and atropine preceding artificial anæsthesia.

A MIRROR OF HOSPITAL CASES.[*]

By GEORGE A. PETERS, M. D.

Michael McGowan, Ireland, was admitted into St. Luke's Hospital, May 4, 1885, with double inguinal hernia, that upon the left side being much the larger of the two. Twelve years ago, while lifting a child at arm's length, he felt something "give way." There was but little pain, although a small lump was observed in the left groin. A physician whom he consulted pronounced it to be hernia, and directed him to wear a truss, which he did for about two years, after which time, as he experienced no pain or inconvenience and the tumor was very small, he discontinued its use. Three years ago, while lifting a heavy weight, the tumor immediately became much larger, and was attended with sharp pain in the lumbar region, for which he remained in bed for a week or two; since this time he has never been able to hold up the hernial swelling with any truss which he could procure.

Eight years ago he came violently in contact with a "sharp corner," and a small bubonocele appeared in the right groin. This gave him no trouble until he lifted the heavy weight three years ago, after which time both his herniæ became larger and painful. For the year or two past he has grown very fleshy. Summing up, this is his condition on admission to hospital, viz.: On the left side is a large, indirect inguinal hernia easily reduced, except a small knuckle of intestine apparently adherent to the sac. The pillars of the ring are readily defined and very much spread, easily admitting four fingers. On coughing or straining, a large mass of intestine comes down, measuring three to six inches.

The inguinal ring upon the right side easily admits two fingers, and the edges are sharply defined. On coughing, only a small bubonocele comes down.

Family history and general condition good, except that he had been drinking freely of spirits for some time.

As he suffered so much from the size of the tumor, and the fact that he could not wear a truss, I determined, after consultation with my colleagues, to perform Banks's operation for the radical cure of the hernia in the left groin.

On May 7th the patient was put upon the table for operation, and with much delay brought under the influence of ether. During almost the entire time of the inhalation he vomited, coughed, and struggled so that it made the operation one of great difficulty.

A free incision was made through the skin, commencing just above the level of the external abdominal ring, and the dissection carried carefully down, layer by layer, until the sac was exposed and the pillars of the ring were brought distinctly into view. The ring was very large and patulous, easily admitting four fingers. The hernia was now reduced by gentle taxis, leaving the collapsed sac in the wound. The cord was found behind and well out of the way. The sac was now opened and a knuckle of gut was found closely adherent to its wall just at a level with the ring. It was not deemed prudent to attempt its separation, and it was left as found. The opening in the sac was now carefully and with much difficulty stitched to the pillars through and through with stout catgut, and the ring closed.

Owing to the restlessness of the patient under ether and frequent attacks of vomiting, the bowels were forced down in a large mass and spread out upon the outside of the belly.

The protruding bowel was carefully guarded with towels and sponges wet with hot water. This stage of the operation was exceedingly difficult and prolonged. It was, however, finally accomplished. A great portion of the sac was now dissected out, two bone drainage-tubes were introduced, and the wound was closed with carbolized catgut and an antiseptic dressing placed over all. During the escape of the bowel the pulse sank very low and he suffered very much from shock, but was finally restored by brandy, ether, and digitalis hypodermically administered.

The patient suffered very much from nausea, pain, and tympanites for a few days after the operation; but these symptoms gradually subsided. The wound did not heal throughout its whole extent by first intention, but remained open at the two angles, gradually filling up with granulations until June 17, 1885, when he was discharged cured.

Alice Surminski, Ireland, aged fifty, married, was admitted into St. Luke's Hospital, January 22, 1886. Six years ago, after lifting a heavy weight, she noticed a small lump in the right groin. Finding that it did not disappear after a few days, she entered Roosevelt Hospital, where she was treated for a short time, but no operation was done. Ever since that time she has felt a weakness in the right groin, and on exertion a tumor would appear which could be reduced. She has never worn a truss.

Ten days ago, after a severe strain, the tumor appeared, was painful, and increased in size. The bowels were constipated, and she suffered somewhat from nausea. On admission, examination revealed a tumor in the right groin below the inner third of Poupart's ligament, globular in shape, about one inch in diameter, elastic to the feel, slightly painful on pressure, and dull on percussion.

A portion resembling a pedicle extended down toward the femoral canal. Before admission attempts had been made to reduce it by taxis, but without success. The attempt was renewed after admission with no result, except to occasion local inflammation and considerable pain. She was ordered strict decubitus and the cold coil was applied.

The tumor was considered to be an incarcerated femoral hernia; contents chiefly omentum, and after consultation I determined to perform Banks's operation, hoping to make a radical cure.

On February 5, 1886, she was put upon the table, ether was administered, and she was quickly brought under its influence. The integument of the groin and neighborhood was shaved, scrubbed, and rendered aseptic. An incision about two inches long was made over the convexity of the tumor and the dissection was carefully made down toward the sac. The connective tissues in this neighborhood were matted together, thickened, and extensively adherent to the sac itself. These adhesions were carefully dissected away and the sac was opened, allowing the escape of some yellowish fluid. When brought into view, the contents of the hernial sac were found to be a sheet of omentum enveloping about three inches of the vermiform appendix, the distal portion of which was doubled upon itself, allowing the knuckle thus formed to project above the omentum, resembling a gland, for which it was indeed mistaken until the unraveling of the tissues determined its true character. The contents were adherent to the sac, but were dissected free, and the vermiform appendix and omentum were separated down to the ring, where each was separately ligated with stout catgut and cut off. The portion of the appendix vermiformis removed was two inches and a half long, and of about the size of a goose-quill. The sac was now tied off, and, with the stump which was left just at the femoral ring, was stitched through and through with catgut. A rubber drainage-tube was now inserted to the bottom of the wound and the skin closed over with fine catgut suture. During the operation the wound was frequently irrigated with a solution of bichloride of mercury, 1 to 1,000. The dressing was iodoform gauze and a spica bandage.

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[*] Read before the New York Surgical Society, November 8, 1886.

The first dressing was not disturbed until February 10th, when the drainage-tube was removed, there being perfect union, except where the tube emerged. During the progress of the cure a small collection of pus occurred which somewhat delayed the healing.

She was discharged cured March 9, 1886.

Early in May, 1883, a gentleman, Mr. S., sixty-five years of age, presented himself with a condition of the penis to which I had never seen a parallel. For more than two years past he had complained of pain in that organ, and changes in structure had taken place which occasioned him much mental worry, and made him decidedly hypochondriacal.

On examination, I found the glans and body of the penis, for about an inch from the end, hard and unyielding to the touch. The prepuce was very hard to the feel, inelastic, and embracing the glans very closely; it could not be drawn back sufficiently to expose it. The portion of the glans penis which could be exposed had the same hard feel, and was mottled with two or three small, red, smooth spots not ulcerated. Pain, although not severe, had been a constant symptom. There was also much itching and burning.

His general health had been considerably affected, but apparently more from mental agitation than from actual disease. The organ was not increased in size. There was no syphilitic or glandular taint.

Fearing that, if left unaided, it might degenerate into epithelioma, I determined to amputate the penis, which was done May 9, 1883.

The operation was done about one quarter of the distance behind the corona glandis with a circular sweep of the knife. The urethra was then dissected out, drawn forward, and stitched with fine sutures to the skin, in order to prevent retraction. The wound healed very kindly, and he returned to his home in the country, May 22d, thirteen days after the operation.

The specimen was handed to Dr. Frank Ferguson, pathologist, who made the following report:

"Examination of the penis from amputation by Dr. George A. Peters, on May 9, 1883.

"The organ was amputated just behind the corona glandis, the prepuce being also removed. The meatus is small, admitting only a No. 15 French sound, and the tissues around it are anæmic and of a peculiar transparent color. The urethra behind the meatus bears the normal relation to a penis of this size. The mucous membrane covering the glans and inner surface of the prepuce is normal. There is a zone of inflammation products in the prepuce and glans throughout their entire extent, and, although generally a considerable distance from the surface (in the glans along the periphery of the corpus cavernosum), in places there extend from the inflammatory zone limited areas which reach the mucous surface. This zone is composed of small round cells (young cells); in places accumulations of considerable size are seen, as in the formation of abscesses, but nowhere is seen any tendency to break down. Some of the blood-vessels in the neighborhood of this zone of young cells are filled with similar small round cells, while the vessels which pass up through the diseased parts to the mucous membrane are empty. The vessels of the corpora cavernosa are generally distended with blood.

"*Diagnosis.*—Inflammation of the submucous tissue of the glans penis and prepuce.

"*Note.*—1. The inflammation is extensive, its products found at the line of incision in the amputation.

"2. There are no epithelial cells found in the glans or prepuce beneath the mucous membrane, nor anything indicating carcinoma or sarcoma.

"3. There has been general pressure on the vessels and nerves by the inflammatory products."

On presenting these two cases of operation for the radical cure of hernia, I desire to call attention to complications occurring in both of them. In the case of McGowan, who took ether badly, on opening the sac, a large mass of intestines was forced, by his efforts to vomit, through the distended and flabby ring, and was a source of much embarrassment and considerable danger until it was returned to its home. The principal assistant should guard very carefully the open ring and head off the first attempt at escape. The danger from shock will be much lessened if the truant gut is kept carefully protected by hot wet sponges.

In the case of femoral hernia, a complication presented—namely, the appendix vermiformis—which I do not remember to have seen in any hernial sac which I have opened. In this case it was, when first seen, supposed to be a gland, but as the mass was unrolled its identity was established. As the hernial mass was adherent to the neck of the sac, it was determined to ligate the entire protrusion so that it might act as a plug. On examining the appendix after its removal, it was found to be pervious down to the very tip, but contained no fæcal matter. The wound of operation healed kindly, and the presence of the divided appendix seemed in no way to retard the cure.

Of all the methods which have been adopted for the radical cure of hernia, the one described above and introduced to the notice of the profession by Banks, of Liverpool, is the most rational to the student and captivating to the surgeon.

The experience which most of us have had with the operation of Heaton by injection and with the needles and wire has not, I will venture to say, been so satisfactory as to convince us that nothing better can be devised.

The methods of procedure adopted vary according to the theories or experience of different surgeons. Some use the silver wire, others aseptic silken thread, and others again carbolized catgut. The result of my experience and observation inclines me to advocate the catgut properly prepared so that it will not dissolve too readily.

Union by first intention in the wound is not so desirable as might at first seem. A sufficient amount of inflammation to procure a dense thickened mass of tissue, provided this is the result of suppuration and granulation about the ring and canal, is to be preferred.

That the operation is a reasonably safe one is, I think, proved by the results already obtained. When the cases are properly selected and the operation is done with all modern precautions, the percentage of recoveries is as large as in the cases reported by Banks and others abroad. Even when such precautions are not observed, the statistics show a death-rate of only one in eight.

In cases where the hernia is large and subjects its owner to much pain and discomfort, where it can not be entirely returned or, if returned, can not be kept in place with a truss, this operation is indicated. Even if it should not result in a perfect cure, the patient will be so much improved as to be able to wear a truss with comfort and become again a bread-winner.

The case recorded above in which I resorted to amputation of the penis is unique in my experience. Dr. Ferguson also states that it is the first of the kind which has been brought to his notice. The operation is to my mind justified by the fact that Mr. S. is now in good health, and there has been no extension of the disease. The relief to his mental condition would in itself sanction the operation.

EXTRA-UTERINE GESTATION

ARRESTED AND DISPERSED BY THE GALVANIC CURRENT.

By A. H. GOELET, M. D.

Mrs. McC., aged thirty-four years, married six years, has had two miscarriages at the third month, the last being three years ago. No living children. When first seen, January 16, 1886, the history given was that she had menstruated last, November 28, 1885, and she believed she was pregnant. She had been up and about, being troubled only with nausea, which she thought natural, until the previous night, when she was taken suddenly with a severe attack of vomiting, followed by a faint feeling and great pain over the lower part of the abdomen. A physician was called, who announced that she was about to have a miscarriage.

She was still suffering severe pain in the lower part of the abdomen, radiating down the thighs, and the nausea was excessive and persistent, the stomach rejecting everything. The vomiting was always induced whenever she attempted to sit up in bed or to move. The abdomen, especially the right side low down, was extremely sensitive to the touch. The temperature was normal.

A careful examination *per vaginam* revealed a considerable enlargement behind and to the right of the uterus, extending up the right side of the pelvis posteriorly. The tumor was firm and unyielding, exquisitely sensitive to the touch and immovable, occupied considerable space, and crowded the uterus against the pubes. The patient showed no evidence of loss of blood, and a diagnosis of extra-uterine pregnancy was made. Opiates by suppository quieted the pain, and an enema the next day removed a mass of hard fæces from the rectum, and in a few days the pain and soreness were greatly relieved, but she felt the nausea whenever she attempted to sit up in bed.

On January 29th she was able to sit up without pain or inconvenience, and I ceased visiting her regularly, deciding to allow time to make the diagnosis more positive.

On February 5th I was summoned to her hurriedly, and found her suffering great pain, which had come on suddenly, accompanied with nausea and faintness as before. She was in a cold sweat, with feeble pulse, and suffering very much more pain than at any previous time. A hypodermic of morphine was immediately given. Further examination revealed the rectum filled with hard fæces. This was brought away by an enema, and the pain was immediately relieved.

On March 1st the tumor had increased perceptibly in size, and was somewhat softer, the touch by vagina giving the impression of fluid.

On March 16th she was seen by Dr. C. C. Lee, who confirmed the diagnosis of extra-uterine pregnancy.

It was decided to use galvanism, and Dr. A. D. Rockwell was asked to see her, March 23d. After a careful examination he thought the diagnosis was clear, and the first application was made on that date. A flat sponge electrode connected with the positive pole was placed over the tumor as felt through the abdominal wall, and a metallic-ball electrode placed against the tumor as felt through the vagina posteriorly to the cervix, and then connected with the negative pole of the battery of twenty cells. For ten minutes the application was continued, the current being frequently interrupted.

This was followed by a second application on March 24th and a third on March 26th. Dr. Lee saw her again with us on the latter date, and thought there had been some decrease in the size of the tumor.

Previous to the use of the galvanism the patient, while able to be about her room, was obliged to walk bent over, and suffered some pain at intervals. She began to improve after its use, and in two weeks was able to go out and walk without pain.

She was seen again by my friend, Dr. Lee, on April 29th. The decrease in the size of the tumor was very perceptible at that time.

Commencing May 3d, weekly applications of galvanism, the current from twenty cells, were made with the view of causing a more rapid absorption of the accumulation. Each sitting was of twenty minutes' duration, with one pole on the abdomen and the other (negative) against the tumor in the vagina. These applications were continued until July 12th, when the accumulation, as felt through the vagina, was of about the size of a small egg. The uterus had become more movable, and menstruation was normal and regular.

The patient was able to go about her duties as usual without inconvenience.

On September 22d the accumulation was scarcely perceptible posteriorly to the cervix, and was not sensitive to ordinary pressure. The uterus had resumed its natural place in the pelvis, and was not sensitive to pressure.

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Correspondence.

LETTER FROM LONDON.

Election of Direct Representatives of the Profession in the General Medical Council.—The Candidates.—The Council.

London, *November 16, 1886.*

The main subject of excitement here this week is the pending election of direct representatives of the profession on the

General Medical Council. Hitherto the members of the profession at large have had no opportunity whatever of influencing the views or action of our chief medical authority, which has consisted exclusively of the nominees of the Crown and of the licensing corporations. But, as stated in one of my previous letters, the Medical Bill passed last summer modified the constitution of the Medical Council, and gave the body of practitioners the right of electing five out of the thirty members who will henceforward preside over the destinies of the profession. Three representatives will be chosen by the practitioners of England, and one each by those of Scotland and Ireland. There is no lack of candidates for the honor and emoluments of a seat upon the Medical Council, and the voting papers which are being distributed this week to English practitioners contain as many as fourteen names, while for the Scotch seat there are three, and for the Irish four candidates. With two or three exceptions, the English candidates have done little to show their fitness for the post they are seeking. They are emphatically "small" men. Dr. B. W. Richardson is perhaps the best known of them, and perhaps the least fit for the dignity in question. He has undoubted genius and unquestioned enthusiasm, combined, however, with the usual defects of those qualities. He has breadth of view, but lacks soundness of judgment. He is one of our most powerful preachers of temperance, but his sobriety of habit is not always associated with sobriety of view. His success in the election is thus more than doubtful. The favorite candidates are certainly Sir Walter Foster and Mr. Wheelhouse. The former, better known as Dr. Balthazar Foster, is a distinguished Birmingham physician, who has lately taken to politics and made a considerable mark therein. Some of your readers may perhaps remember his excellent articles on the sphygmograph in Quain's "Dictionary of Medicine." Latterly, as a Member of the House of Commons, he has been serving his country and his profession rather than mankind at large. He had much to do with perfecting the Medical Bill, under which he will now probably become one of the first representatives of the democratic principle in the government of the medical profession. Mr. Wheelhouse, who is "run" by the same committee as Sir W. Foster, is a Leeds surgeon, who has held important offices at the London College of Surgeons and in the British Medical Association. Of the other candidates, two or three will secure many votes among the more hardly pushed of our poorer doctors as especially representing the policy of protecting the practitioner by prosecuting the quack, while the rest of the candidates for the most part represent nobody or nothing but themselves, and will therefore presumably not secure a high place in the election list. Of the Scotch candidates I have little to say, their names for the most part conveying nothing to me. In Ireland one of the candidates, Dr. Jacob, is editor of the "Medical Press and Circular," a small weekly which, by the aid of its Irish connection, still manages to keep afloat alongside of the "Lancet" and "British Medical Journal." In his capacity of journalist Dr. Jacob has frequently had occasion to comment severely upon the doings and the not-doings of the Council, and if he is elected it will be interesting to see how far his past expressions will influence his conduct as a councilor and how far his new dignity will modify his editorial behavior. The same remark applies to Dr. Glover, one of the English candidates, who has for years as a writer in the "Lancet" dealt in no very friendly spirit with what he has considered to be the shortcomings of the Council.

A brief sketch of the history and *personnel* of the Medical Council in the past may not prove unacceptable to the transatlantic reader. Constituted in 1858 by act of Parliament with the view of reconciling the divergent interests and procedures of our numerous licensing bodies, the first Council contained a very galaxy of talent. It was presided over by the famous surgeon, Sir Benjamin Brodie, and among its members were such men as Sir Thomas Watson, Joseph Henry Green, James Syme, Dominic Corrigan, Robert Christison, and William Stokes. Their successors have been scarcely less distinguished. Sir George Burrows, the two Pagets and the two Richard Quains, Sir William Gull, John Simon, George Rolleston, and Matthews Duncan, have all at one time sat round the Council table. But, in spite of the eminence of individual members, national jealousies and the very irreconcilability of the interests represented have prevented the Council from doing much of the work it was expected to do. As a proof of this, it has had so little influence with the legislature that we have had to wait for well-nigh thirty years to see our medical examinations placed upon a really satisfactory footing. With a stronger and less divided Council, the Medical Bill of last summer would have been passed years ago.

The Council is not indeed a good example of the practical and business-like spirit upon which we Britishers are apt to plume ourselves. Any one who desires to be initiated into the way how not to do things, has only to make his way into the Council chamber during one of its sessions. He will be conducted into a narrow gallery, overlooking a large, square room, lighted from above, in the center of which is a huge oval table. Around this he will find seated the four and twenty elders who constitute the Council. In the chair at one end of the oval table he will see the president, Sir Henry Acland, regius professor of medicine at Oxford, a kind and courtly gentleman, manifestly overweighted by the duty of keeping the cantankerousness of some of his Scotch colleagues and the garrulity of some of the Irishmen within proper limits. To his right sits Dr. Matthews Duncan, the cold exponent of gynæcological nihilism. A little farther down the table sits the most practical member of the Council, John Simon, side by side with Dr. Richard Quain, whose long and successful residence in London has not much modified his Irish liveliness and brogue. Near them we come upon the bald head and venerable locks of the Rev. Dr. Haughton, on whom has devolved, since the death of Sir Dominic Corrigan, the office of Council Jester—an office sorely needed to enliven the otherwise dull proceedings of the Council. On the other side of the table the most noticeable figures are those of Professor Struthers and Professor Humphry, two distinguished anatomists, and Sir Henry Pitman, the treasurer, who, with a genius for business, does all in his power to keep the Council from its many excursions into desultory and fruitless discussions. These, in spite of Sir Henry Pitman, are neither few nor far between. Session after session the Council wastes its time in mutual recriminations, in debates which lead nowhere, in passing conflicting resolutions, etc., and then has to scurry through its real work in hot haste. The way in which the members are remunerated is believed to have much to do with this misuse of energy. Each member is paid five guineas for each day of the session and his expenses, and some of the members who have little work at home would be more than human if they did not do their best to prolong the period of emolument. For the Scotch and Irish members the session of the Medical Council provides a pleasant ten days' holiday in London, with this difference from ordinary holidays that they return home the richer for it instead of the poorer. But, when we consider that their fees are drawn from the pockets of poor commencing practitioners, who have to pay five guineas for the privilege of being placed on the medical register, it is not difficult to understand that the lavish remuneration of the councilors, in proportion to the work they do, excites very general disgust among the medical profession in these islands.

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THE RECENT LITERATURE OF STRABISMUS.

Three notable contributions to the literature of strabismus have lately been published. One of them, by Stilling, is to be found in the "Archives of Ophthalmology." The author begins by considering the position of rest. In each form of refraction, he says, every variety of the position of rest may occur. In the great majority of cases of hypermetropia it is convergence, while in myopia it is divergence. The predominance of convergence in hypermetropia is greater than that of divergence in myopia. The position of rest must be considered as an important factor in the production of squint. Stilling next considers the relations of the position of rest to adduction and abduction, and states that it is sufficient for the purposes of the investigation to compare distal abduction with distal adduction. The values observed for distal abduction by testing with a lighted candle at a distance of twenty feet, and making the patient look through prisms with the base turned first inward and then outward, do not differ materially from those obtained by first approximating the candle while lowering the visual plane, and only gradually removing it. The relations of the values of abduction and adduction to the position of rest of ametropic eyes are by no means constant; thus, there may be increased abduction with very good adduction, the position of rest being divergence. There are cases in which abduction is not excessive and adduction is abnormally great, while the position of rest is divergence. In a certain number of hypermetropes convergence is the position of rest, although abduction is increased and adduction is abnormally weak. In certain cases of hypermetropia or myopia there may be insufficiency of the interni, or even relative actual divergent squint, while the position of rest is, nevertheless, convergence. This state is not, therefore, as a rule, dependent on the muscular conditions. Among the factors to be considered as influential in determining the position of rest are the shape of the orbital cavity, the topographical relations of the fibrous structures and other parts surrounding the globe, the position of the entrance of the optic nerve, and perhaps also the angle alpha. In emmetropia, as well as in hyperopia, these factors probably favor convergence as a position of rest, while in myopia the opposite is likely to prove to be the case. Normal vision is a continual struggle for binocular fixation by the ocular muscles against natural obstacles. If, by reason of congenital amblyopia, an excessive difference of refraction, or some other cause, one eye is incapable of participating in binocular fixation, the laws of relative accommodation will become inoperative, and the eyeball, instead of assuming a convergent position corresponding to the object fixed, will pass into its individual position of rest. If this position is a marked convergence, convergent squint will ensue; if it is slight convergence only, the consequence will be relative divergent squint, afterward changing into absolute convergent squint by reason of secondary atrophy of the relaxed external rectus and contraction of the internal rectus. The position of rest for hypermetropes being marked convergence, active contraction of the external recti muscles will be necessary in order to sustain binocular fixation. Under such circumstances squint may be produced by mere fatigue of the external muscles. The cause of the squint is not the hypermetropia, but the position of rest usually associated with hypermetropia—namely, convergence. Furthermore, the prevalence of the divergent form of squint in myopia is not due to the anomaly of refraction as such, but to the prevalence of divergence as a position of rest in myopic eyes. The development of inward squint depends in each case upon the position of rest; if it is divergence or parallelism, inward squint can not develop. If the position of rest is convergence, the degree of squint and the rapidity of its development will depend upon the amount of this convergence and upon the strength of the internal recti muscles. Should the cause of the paralysis be removed, the disappearance of the consequent paralytic squint will depend upon the issue of the struggle between binocular fixation and the position of rest. The spontaneous cure of squint also depends upon the same issue. Since spontaneous cures occur, as a rule, during the period of growth, they are obviously the result of a change in the position of rest brought about by changes in the size of the globe and its annexa.

The second contribution, by von Graefe, appears in the "Archiv für Ophthalmologie." The author first considers the various forms in which hypermetropic convergent squint presents itself, as follows: 1. Strabotic convergence becomes manifest whenever that degree of tension of accommodation is excited which enables the hypermetrope to see distinctly. These hypermetropes are readily capable of binocular fixation, but must renounce the power of seeing distinctly at the same time, and therefore have to choose between binocular vision with indistinct vision, and diplopia in which the macular image is optically and physiologically a perfect one, while the other eccentric image is a normal one, but physiologically indistinct. 2. Strabotic convergence is constantly present to a certain extent, but increases in degree whenever the accommodation is brought into play for purposes of distinct vision. 3. Strabotic convergence is constantly present to the same degree, and can not be influenced by any further act of accommodation. The theory of accommodation introduced by Donders differs from that cultivated by von Graefe, which had previously prevailed, as follows: Von Graefe's theory, supported by Schweigger, presupposes that the passive elastic increase in tension or contraction of the muscle is an accidental co-existing complication, while it is more rational, and more in accordance with existing relations, to assume that it is a condition acquired through hypermetropia, in consequence of unusual and excessive demands made upon the contractility of the muscle. Von Graefe himself holds to the Donders theory, regarding it as much the more satisfactory from a pathogenetic standpoint, and refers with some doubt to the view urged by Schweigger, that periodical squint may continue to exist as such without ever passing into permanent squint. The whole paper is involved in style and difficult to condense, but the conclusions may be expressed somewhat as follows: Typical convergent squint with constant deviation really depends on an abnormal passive shortening of the internal rectus muscle. Excessive demands for active contractile shortening often lead to such a squint; and, in those cases in which there is no suitable transformation of the original relations between accommodation and convergence, hypermetropia always causes this increased contractile shortening. Therefore, according to Donders's theory, hypermetropia is the prime cause of the development of typical convergent squint.

The third contribution, by Kalt, given in the "Archives d'ophthalmologie," relates to a number of experimental observations on dogs in regard to the results of observations for strabismus. The first portion of the paper deals with simple tenotomy of the muscle, and the results found at autopsies and histological examination. In the second part the author discusses the subject of advancement of the muscles. The third part is devoted to a consideration of the comparatively new operation of capsular advancement. The conclusions are as follows: 1. A divided tendon loses the characteristics of a tendon, and assumes the aspect of a small conical fibrous bud covering the end of the muscle. 2. This bud does not blend directly with the sclerotic during the period of cicatrization. 3. It is attached to the sclerotic by delicate adhesions, which by themselves would furnish but a feeble insertion to the muscle. 4. The numerous adhesions caused by the inflammation in the wound made with the scissors unite together the globe, the muscular and ocular capsule, the tendon of arrest, and the tendon of the muscle. An interposed tissue is the capsule, and, as the traumatic inflammation is not limited to the region of the operation, numerous adhesions are often found, at a second tenotomy, far back between the muscle and the sclerotic, sometimes as far back as the entrance of the optic nerve.

THE MEDICAL CORPS OF THE NAVY.

That the medical profession is as honorable and as important as any other profession is a fact that, to a medical man, can not be easily gainsaid. A man may ennoble or degrade his profession to a degree according to his individuality, but who shall say that any honorable pursuit in life is *per se* inferior or superior to another? Yet this, in effect, is what the line officers of the navy say of the medical profession, although in justice it must be said that it is chiefly among the younger officers that the sentiment finds expression. We have alluded in the past to the intolerable treatment to which our professional brethren of the navy are subjected, and in what we are now about to say we believe there will be found nothing that is not perfectly fair as a presentment of the actual state of things.

It is in the navy that the medical man discovers for the first time that he has identified himself with an inferior caste, from which he has no more recourse than a member of a Brahman community. He learns that the profession of arms is intrinsically and *per se* superior to all others, and that it is the duty of all other professions to own this. Put into practice, this means that, should a boot-black possess sufficient influence with the Congressman of his district to get an appointment to the Naval Academy—and it is said that several boot-blacks have been so fortunate—and should a gentleman by birth and antecedents, after a college and medical course paid for by himself and not by the Government, be rash enough to enter the Naval Medical Service, the latter would find himself inferior in caste to the former. The medical man is a non-combatant; he can never become a hero; his sphere is confined to his "pills," which, in fact, is usually his cognomen on board ship. While throughout the world and in all other military services, not excepting our army, the profession holds a dignified and honorable position, in our navy alone do we hold it degraded. Fifty years ago the abominable treatment of English naval surgeons led to a reform which gave them a position commensurate with the dignity of the profession on shore. Dickens, referring in "Bleak House" to this well-known state of affairs, has the following passage: "The more spirit there is in it [the medical profession], the better for mankind and the worse for those mercenary taskmasters and low tricksters who delight in putting that illustrious art at a disadvantage in the world by all that is base and despicable. The treatment of surgeons aboard ship is such that I would submit the legs—both legs—of every member of the Admiralty Board to a compound fracture, and render it a transportable offense in any qualified practitioner to set them, if the system were not wholly changed in eight and forty hours."

It is a well-known matter of history how the medical schools and the profession at large in Great Britain set themselves to combat this deplorable state of affairs. Young physicians were fully warned of what they had to expect, and were systematically discouraged from entering the naval service. The profession resented the unearned insult to themselves, and achieved a noble victory. The English have improved, but the status of the American naval surgeon is now very nearly what that of his English brother was then.

In a very forcible pamphlet recently published by an ex-staff officer of the navy—probably an engineer—we find the following passage: "What the panoply of virtue is to a woman, that is rank to its possessor on board of a man-of-war. A young naval officer once said in my hearing, 'I don't want a navy doctor aboard my ship. If I wanted a doctor, I would *ship* one for the cruise.' God help the American officers and men aboard ship in an epidemic of yellow fever or cholera, or wounded in battle, under such a system. The medical profession of noble men in civil life have always had reason to be proud of the body of surgeons who represent them in the medical corps of the navy." The American naval surgeon has no rank, but in place of it a kind of bastard rank to stamp his inferior position. This is known as relative rank. In our army, and in every other army and navy, the surgeon holds rank absolutely. To make matters still worse, in our navy the entering medical officer holds the lowest relative rank possible, while in the army and in almost every other service he enters as a first lieutenant or higher. The entering medical officer in the navy lives for several years in the steerage, often has to swing in a hammock, and considers himself fortunate if he is allowed the privilege of sleeping on a transom. It is only on receiving his promotion that he is allowed to live with the other officers in the ward-room. What his subsequent life is, and what the indignities and insults are that he often has to put up with, even in the performance of his duty, may be judged of by the following extracts from an address by a distinguished medical officer: "Contributing to this is the dread lest the medical officer will, by ever so little a semblance of authority, encroach upon their own sacred and exclusive domain, and get to fancy himself something more than a humble subordinate of the barber or bone-setting caste." "The medical officers of the navy, despite personal indignities and official discourtesies . . . have much cause for mutual gratulation that the naval hygiene of to-day is not so sad and doleful a record as it was fifty years ago."

It is surprising that, notwithstanding this life of suppression and indignity, the corps has maintained a high degree of ability and efficiency. The *esprit de corps* has not been completely crushed out, but the system has shown its working in another direction. Since 1869 there have been thirty-five resignations in a small corps, and for several years past there have been a dozen vacancies or more which it is found difficult if not impossible to fill. Contrast this with the state of things in the army, which for one vacancy has a hundred candidates, or with the Marine Hospital Service, which is almost equally favored. Time can not fail to change the existing state of affairs; it appears incredible that it should have continued so long. It is an insult to every medical man in the country and to the profession at large.

MINOR PARAGRAPHS.

COMPULSORY MEDICAL ATTENDANCE.

A WRITER in the London "Truth" commends the Russian law under which a practitioner of medicine is compelled, on pain of being fined, to attend to any patient for whom his services may be demanded. This, he considers, "is a much better means of keeping a medical man up to the mark, where the patient is not a 'paying' one, than the remote prospect of an inquest before a medical coroner." "I observe, too," he adds, "that in Russia medical fees are regulated by law, which is also not a bad idea." Probably Jack Cade would have entirely coincided with this writer. Not long ago we published a touching illustration of the beneficent action of the Russian law of compelling medical men to attend to any and all calls. It would be interesting to know the circumstances that have given rise to the English writer's approbation of the barbarous state of things to which he alludes.

DUELING AMONG THE GERMAN STUDENTS.

A CURIOUS account is given in "Lyon médical" of the adoption at a recent Congress of German students, held in Leipsic, of certain propositions emanating from the Berlin delegation, looking to the establishment in each university of an arbitrating tribunal composed of students, whose good offices shall be interposed in cases of quarrels, with the view of reconciling the adversaries. The members of the tribunal are to promise, on their honor, to preserve the strictest secrecy concerning what may pass in the debates before them, and under no circumstances can a decision be rendered to the effect that a duel is proper. Duelists must still take their chances under the law, but it is suggested that the penalty ought to be visited twofold on him who provokes a duel without cause, and reduced a quarter for him who is forced to fight. It is gravely added that these propositions will be submitted to the Reichstag.

ITEMS, ETC.

Infectious Diseases in New York.—We are indebted to the Sanitary Bureau of the Fourth Division of the Health Department for the following statement of cases and deaths reported during the two weeks ending November 30, 1886:

DISEASES.	Week ending Nov. 23.		Week ending Nov. 30.	
	Cases.	Deaths.	Cases.	Deaths.
Typhus	0	0	1	1
Typhoid fever	33	7	31	10
Scarlet fever	27	4	21	7
Cerebro-spinal meningitis	6	6	3	3
Measles	318	38	323	42
Diphtheria	101	43	84	41
Small-pox	1	0	0	0

The Health of the State of New York.—We learn from the State Board of Health's "Monthly Bulletin" for October that the whole number of deaths reported for the month was 7,370, of which 37 per cent. were of children under five years of age. In each thousand deaths there were 226·20 from zymotic diseases, including 66·89 from diarrhœal diseases, 26·32 from typhoid fever, and 83·85 from croup and diphtheria.

The Massachusetts State Board of Health has issued a manual containing the statutes and decisions of the Supreme Court in matters relating to the public health. The manual is for the use of local boards and all persons who are interested in sanitary mattes.

The New York Academy of Medicine.—It is announced that at the next meeting of the Section in Neurology, Friday evening, the 10th inst., Dr. L. Putzell will present a case of progressive facial hemiatrophy, and that Dr. W. F. Mittendorf will read a paper on "Ophthalmoplegia Externa."

The Boston Free Hospital for Women.—We are glad to learn, from the "Eleventh Annual Report," of the continued prosperity of this admirable charity. The building fund now amounts to $22,870.90. The medical officers are Dr. William H. Baker, visiting surgeon; Dr. F. H. Davenport and Dr. John W. Elliott, assistant surgeons; Dr. G. N. P. Mead, house surgeon; Dr. C. P. Strong and Dr. J. B. Swift, surgeons to the out-patient department; and Dr. W. F. Whitney, pathologist. The consulting board includes Dr. D. H. Storer, Dr. J. P. Reynolds, Dr. A. D. Sinclair, and Dr. F. Minot.

The Foreign Faculties.—It is stated in the "Progrès médical" that Dr. Lustgarten, assistant at the Vienna dermatological clinic, has been nominated Docent in dermatology; that a pathological institute has been opened at Bonn, under the direction of Professor Köster; and that a psychiatric clinic has been inaugurated at Strassburg.

Naval Intelligence.—*Official List of Changes in the Medical Corps of the United States Navy for the week ended November 27, 1886.*

LAW, HOMER L., Surgeon. Ordered before the Retiring Board, December 2, 1886.

Lippincott, George C., Passed Assistant Surgeon. Ordered before the Retiring Board, December 6, 1886.

Marine-Hospital Service.—*Official List of Changes of Stations and Duties of Medical Officers of the United States Marine-Hospital Service for the two weeks ended November 27, 1886:*

Williams, L. L., Assistant Surgeon. Granted leave of absence for twenty-four days, to take effect when relieved. November 15, 1886.

McIntosh, W. P., Assistant Surgeon. Granted leave of absence for twenty-seven days. November 26, 1886.

Norman, Seaton, Assistant Surgeon. When relieved, to rejoin station (New York); granted leave of absence for twenty-three days. November 27, 1886.

Society Meetings for the Coming Week:

Monday, *December 6th:* New York Academy of Sciences (Section in Biology); Medico-Chirurgical Society of German Physicians (annual); Morrisania Medical Society (private); Brooklyn Anatomical and Surgical Society (private); Utica, N. Y., Medical Library Association; Boston Society for Medical Observation; St. Albans, Vt., Medical Association; Hartford, Conn., City Medical Association; Chicago Medical Society.

Tuesday, *December 7th:* New York Obstetrical Society (private); New York Neurological Society; Elmira, N. Y., Academy of Medicine; Buffalo Medical and Surgical Association; Ogdensburg, N. Y., Medical Association; Medical Societies of the Counties of Herkimer (semi-annual—Herkimer) and Saratoga (Ballston Spa), N. Y.; Hudson, N. J., County Medical Society (Jersey City); Androscoggin, Me., County Medical Association (Lewiston).

Wednesday, *December 8th:* New York Pathological Society; American Microscopical Society of the City of New York; Medico-legal Society; Medical Societies of the Counties of Albany, Cayuga (semi-annual), Cortland (semi-annual), and Montgomery, N. Y.; Pittsfield, Mass., Medical Association (private); Philadelphia County Medical Society (conversational).

Thursday, *December 9th:* New York Laryngological Society (annual); Society of Medical Jurisprudence and State Medicine; Brooklyn Pathological Society; South Boston, Mass., Medical Club (private); Pathological Society of Philadelphia.

Friday, *December 10th:* New York Academy of Medicine (Section in Neurology); Yorkville Medical Association (private); Medical Society of the Town of Saugerties, N. Y.

Saturday, *December 11th:* Obstetrical Society of Boston (private).

OBITUARY NOTES.

Francis M. Purroy, M. D., of Fordham, died on Thursday, November 25th. He was graduated from Bellevue Hospital Medical College in 1870, and for eleven years had been a surgeon in the Police Department. He was a member of the New York Pathological Society and of the Morrisania Medical Society.

John P. Gray, M. D., of Utica, N. Y.—Dr. Gray died last Monday, at the age of sixty-one, after having been seriously out of health for a number of months. The deceased had for many years been the superintendent of the State Lunatic Asylum at Utica, and had long been prominent in connection with medico-legal matters. At the time of his death he was the professor of psychological medicine and medical jurisprudence in Bellevue Hospital Medical College, and of psychological medicine in the Albany Medical College, and the editor of the "American Journal of Insanity."

Proceedings of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Meeting of October 27, 1886.

The President, Dr. John A. Wyeth, in the Chair.

Obstructive Jaundice and Transposition of the Abdominal Organs.—Dr. T. Mitchell Prudden presented specimens from the body of a middle-aged laborer who, before his entrance into the hospital, had suffered from a mild attack of gastritis, with anorexia, occasional nausea, and some diarrhœa, and had lost flesh, strength, and appetite. On his admission the liver was found considerably enlarged, extending well over to the left side, smooth, and somewhat tender. There was slight dullness with râles at the apex of the right lung. There was nothing abnormal on palpation of the abdomen. The patient remained in about the same condition for a month, when, on the 5th of September, without apparent cause, he had a slight chill and a rise of temperature to 103° F. It subsequently rose to 106°, and again fell to normal; two days later there was another rise and fall, and the temperature then remained down until October 12th, when it rose to 104° or over, and remained between 103° and 105° until shortly before death, when it fell, to rise again at the time of death. Numerous crepitant râles appeared over the lungs, the patient gradually failed, and died on October 12th. A few days before death a hypodermic needle was introduced, presumably into the liver, an inch and a half below the free border of the ribs and a little to the right of the median line. A liquid was withdrawn containing a large number of bacteria. Subsequent use of the needle failed to withdraw anything but a few drops of blood, which were used for cultivation purposes with negative results. At the autopsy, emphysema, chronic bronchitis with interstitial pneumonia, and marked œdema of the lungs were found. The omentum was absent; the cæcum occupied the right hypochondriac region; the large intestine passed a short distance upward, then directly to the left side, down to the pelvis, again upward to about beneath the umbilicus, and thence turned sharply upon itself to pass down into the pelvic cavity. The spleen was long, composed of three lobes and several supernumerary spleens. The kidneys appeared normal from the outside; they had not yet been further examined. The gall-bladder was to the right of the median line, much atrophied, and its walls were thickened. The cystic duct was occluded by a gall-stone. The liver was enlarged and in a condition of cirrhosis as well as of moderate fatty degeneration. The left lobe was nearly as large as the right one. The sudden rise in temperature during life had led to the suspicion of an infectious disease, hence the second puncture with the hypodermic needle; but it appeared from the position of the organs seen at the autopsy that the needle had not penetrated the liver, but what corresponded to the ascending colon. The thoracic organs were in their normal position.

Lesions induced by a Poisonous Dose of Corrosive Sublimate.—Dr. Roosevelt presented the kidneys and intestine of a colored woman, aged nineteen, who had died some days after taking corrosive sublimate. The case was interesting because this drug was rarely used in this country with suicidal purposes, and because of the large dose taken. On the morning of her admission to the hospital the woman had taken twenty-five grains in solution. She vomited a certain amount, and immediately afterward experienced severe pain in the throat and abdomen. An hour and a half later severe purging began. Probably five hours elapsed before her admission into the hospital, but shortly after it she passed urine containing twenty per cent. of albumin, together with abundant granular casts, epithelium, and blood. She stated that her feet and hands had swelled occasionally during the past year. Two days after her admission it was recorded that she had suffered from constant purging, and had passed only an ounce and a half of urine since her admission. The third day one drachm of urine was obtained by catheterization. The patient was sinking. She exhibited no uræmic symptoms. On the fourth day she had fifteen stools, small in amount, containing blood but no mucus. She continued to vomit a yellowish fluid; there was abdominal pain with tenderness. The urine was very scanty and albuminous, and contained granular and epithelial casts, the latter presenting very many different forms. Six days after her admission the patient went into collapse and died. Most of the time the temperature was either normal or subnormal, but the night before death it rose to between 102° and 103° F. The autopsy showed very marked acute nephritis which had almost completely destroyed the function of the organs, the patient having passed but two ounces and five drachms of urine during the six days she had lived after taking the poison. The epithelium in the uriniferous tubules was in various stages of disintegration. It was a noticeable fact that, notwithstanding almost complete suppression of urine, the patient had had no headache, muscular twitchings, nor other symptoms of uræmia. Many cases were now on record in which absence of function on the part of the kidneys had failed to produce symptoms of uræmia, and the question arose whether uræmia was not an incidental rather than a constant attendant of Bright's disease. The speaker did not think the diarrhœa in this case would account for absence of this symptom. There was also the characteristic diphtheritic lesion of corrosive-sublimate poisoning in the lower portion of the intestine. The mucous membrane of the stomach was red, swollen, and covered with mucus.

Broncho-pneumonia in a Child, with unusually high Temperature.—Dr. L. Emmet Holt presented the lungs and kidneys of a child eleven months old, the lungs showing the lesions of broncho-pneumonia, with some abscesses of the size of a pea, and the kidneys the lesions of acute parenchymatous inflammation. The child had been perfectly well until October 9th, when it began to have symptoms pointing very strongly to broncho-pneumonia. It lived sixteen days, and most of the time the temperature was about 105° F. For six days in succession it reached 106°, and on two occasions 107°. Antipyrine failed to keep it down for any length of time. A better effect was obtained from lukewarm baths. Besides the lesions mentioned, there was a slight amount of meningitis and entero-colitis. There were no tubercles.

Dr. J. Lewis Smith was very reluctant to use antipyrine to reduce the temperature in the diseases of children. He would prefer to use salicylate of sodium.

Dr. Holt had not been accustomed to use antipyrine in pneumonia, but in other diseases of children he had found it an efficacious febrifuge, not followed by signs of collapse.

Congenital Absence of the Right Lung.—Dr. J. Lewis Smith presented the heart and one lung of a negro child, dead at the age of two months. When ten days old the child was brought to him by the mother, who said that from its birth its respiration had been accelerated. Dr. Smith found the respiration 70 a minute, the pulse feeble and frequent, the temperature not markedly elevated. There was complete dullness on percusssion over the right side, yet he could hear over this side apparently normal respiratory sound. On the other side there was clear resonance, with a distinct vesicular respiratory murmur. Thinking there was pleurisy on the right side, he introduced the hypodermic needle, but only withdrew a few drops of blood. He had the mother take the child to an experienced surgeon, who failed to withdraw any fluid from the pleural cavity, and was of opinion that there was pneumonic consolidation. More than a month later he was asked to see the child again, and found similar physical signs. The child had grown, and it was thought that if there had been pleurisy there would have been some elevation of temperature, and the child would not have been so well developed. A day or two afterward he was notified that the child had died suddenly. On opening the chest he found the left lung larger than usual. There was no lung, unless in a rudimentary state, on the right side. A partial report on the specimens had been handed him by Dr. McNamara. There was only a fragment of lung tissue, which had never been dilated, corresponding to the right lung. In this the right bronchus was lost. The left ventricle had three openings—one into the aorta, one into the auricle, and a third through the septum into what was supposed to be the right ventricle. There was but one auricle. He could find no left pulmonary artery. The blood coming from the vena cava poured into the one auricle, and from the auricle into the ventricle, and from there it was discharged into the aorta and through the opening in the septum into the right pulmonary artery. The child being colored, he had not noticed cyanosis. The specimen was referred to the Committee on Microscopy.

NEW YORK NEUROLOGICAL SOCIETY.

Meeting of November 2, 1886.

The President, Dr. C. L. Dana, in the Chair.

Bitemporal Hemianopsia.—Dr. Edward Waitzfelder presented a lad who, five months ago, had noticed a "blur" over the right eye. He consulted Dr. P. A. Callan at the New York Eye and Ear Dispensary, who diagnosticated right temporal hemianopsia. The condition grew worse; the left optic nerve became involved, and left temporal hemianopsia developed. The nasal fields of both eyes were unaffected. Two months ago the patient had choked disc in the right eye. His condition November 1st was as follows: No other basal nerve was affected; complete bitemporal hemianopsia, the whole of the fixation-point being included in the visual field. Theoretically, the speaker remarked, the fixation should be bisected, but practically it never was. There was atrophy of both optic nerves, most marked in the right. Vision: R. E., $\frac{8}{200}$; L. E., $\frac{20}{20}$. Diagnosis: Tumor of the chiasm in the anterior portion; pressure upon the fascicula cruciati of both optic nerves, the fasciculi laterales being as yet unaffected. There was no tubercular or syphilitic history. The rapid growth of the lesion pointed strongly in the direction of sarcoma.

So far as the speaker could ascertain, this was the first case recorded in the English language. The point of special interest in it was that the fixation point was "dodged" by the line of the hemianopsia. Why this was so he could not say, but it would seem to indicate that there was a special set of nerves intended only for extreme central vision.

Remarks were made on the case by Dr. Pooley, Dr. Webster, Dr. Starr, Dr. Leszinsky, and Dr. Bullard.

Thomsen's Disease.—Dr. George W. Jacoby presented a young man suffering from this disease.

Cocaine and the so-called Cocaine Habit.—Dr. W. A. Hammond made some remarks upon his personal experience with some of the preparations of cocaine. He had used only the fluid extract and various wines of coca and hydrochloride of cocaine. The fluid extract had been discarded by him for the last two or three years, mainly because it had been badly borne by the stomach; it excited nausea and was disagreeable to the taste. He then began the use of the wines, but, finding that they differed so much in their effects, he gave them up until he suggested to Thurber & Co. to try to make a wine of coca free from tannin and extractive matters, and they had, he believed, entirely succeeded in doing so. There were two grains of the hydrochloride of cocaine to the pint of wine. With this preparation he had experimented extensively, not only upon others, but upon himself. He had used it in spinal irritation with excellent results—results which could not be attributed alone to the wine, but in part to the cocaine. He had used it also as a general tonic and for fatigue. For some time past he had been in the habit of taking a wineglassful at the close of his day's duties, and with benefit. It certainly had a decidedly restorative effect without being followed by a feeling of depression. He had also used it in some cases of dyspepsia with a very irritable state of the stomach. He supposed its action was by lessening the sensibility of the stomach, as it lessened sensibility when applied to other parts. It was remarkable to what an extent the irritability of the stomach was overcome by doses of two or three teaspoonfuls of the wine of coca repeated at intervals of fifteen or twenty minutes, until half a dozen doses had been taken. If the first doses were vomited, the succeeding ones would be retained longer, until finally they were retained altogether. Cases of irritability of the stomach due apparently to spinal irritation had been relieved within a few hours by this treatment. Generally when he wished in any case to produce a powerful therapeutical effect, he employed the salt. He then spoke briefly of the physiological effects of coca, and said that the first writer who had described its effects upon the native Indians of South America had given an exaggerated account of its baneful influence, and his ideas had been copied over and over again without the authority being given, until our minds had become thoroughly indoctrinated by them. That author had said, among other things, that coca rendered the teeth black, produced ulceration of the tongue, caused the breath to be fœtid, the jaws to become ulcerated, and the bones to soften, and rendered the patient an idiot. But subsequent observers had said that such results must be entirely exceptional, as they had never seen them. If there was discoloration of the teeth, the speaker thought it might be accounted for by the lime which the Indians mixed with the leaves, or by the presence of tannin. There had recently been some very striking stories in the newspapers regarding the injurious effects of the drug upon persons who had become addicted to its use. In order to determine whether or not there was any truth in these statements, he made some experiments upon himself. He first injected hypodermically a grain of the hydrochloride of cocaine, which caused an exhilaration of spirits and a happier state of mind than he had enjoyed during that day. He was unable to sleep that night until four or five o'clock in the morning, and when he got up he had a severe headache. He also had a large evacuation of urine. The effect of the drug was to produce an exhilaration such as would be produced by two or three glasses of champagne. The next night he injected two grains, which produced the same pleasant feeling, and in addition he felt an inordinate desire to write. He wrote eight or ten pages of foolscap, and thought it was the best that he had ever written, but the next morning he found that it was the most extreme nonsense. Each sentence was complete in itself, but no two sentences had any relation to each other. The first part was more incoherent than the latter. The next night he injected three grains, and, although he again felt the disposition to write, he did not indulge it, but he talked a great deal, and made speeches. He knew what he was about, and was able to restrain himself, but it was pleasant to speak. He went to sleep late, and again awoke with a severe headache. It was a peculiar fact in his case that at the point of injection there always developed redness and swelling, stopping short only of an abscess. He now had several hard spots on his arm, and waited four or five days, when he injected six grains of hydrochloride of cocaine, three grains at two different places. He then felt decidedly "upset," yet he did not lose consciousness nor his relation to things. He gave instructions to the servants correctly. But he did not feel a strong disposition to write or to talk. He was unable to sleep at all that night. The injections were always followed by a large evacuation of urine, and by headache next day, but without debility. Three nights later he injected eight grains, with about the same effects. The next night he injected eighteen grains, making six different punctures, all within the space of twenty minutes. He became intensely exhilarated, and was unable some hours afterward to recall what he had done. He was in his office, but in some way got to bed, and the next day he found things in more or less disorder in his office. His headache remained for two days, and there was over-action of the heart, palpitation; he could hear it beating on raising his arm to his head. Exaggerated action of the heart had also attended the smaller doses. But he experienced none of the horrible effects which were said to attend the use of the drug in large or continued doses; no disposition to murder or to acts of violence. He acquired no habit; he was able to quit its use at once. Regarding the cocaine habit, he would say that he had given the drug in doses of from one to five grains for three months to a lady suffering from exophthalmic goître, and she was then able to discontinue its use without any difficulty. At no time did she manifest any loss of moral principle. She took two doses a day. From a theoretical standpoint, perhaps cocaine should not be administered in this disease, but it proved beneficial in this case, for the heart's action, which had been increased, diminished, and became steadier, and the patient felt much better. He had also given it for some months to a lady addicted to the opium habit, carrying the dose up to five grains injected once a day. It overcame the opium habit, and the patient failed to acquire the so-called cocaine habit. In her, and in other patients to whom he had administered cocaine, it produced, as in his own case, extraordinary action of the heart, increased temperature and blood-pressure, perspiration, and indisposition to sleep.

He had used lint soaked in a ten-per-cent. solution of cocaine, applied to the vulva, for the relief of masturbation; but it had failed in one case—that of a girl four or five years of age. It had been ineffectual in boys, applied to the glans penis. In three cases of melancholia in women who refused to speak, injections of hydrochloride of cocaine had overcome the prolonged silence. The first was a marked case of melancholia, with stupor, and the patient had not spoken for nine months. At the first sitting he injected one grain of hydrochloride of cocaine. The patient then nodded or shook her head in reply to questions, but would not speak. At the next sitting three grains of the drug were injected, and within four minutes the patient replied to questions by yes and no, and within ten minutes she began to talk, and kept on talking, although incoherently. She did not sleep that night, and seemed to have pain in the head the next morning. The next injection of three grains caused the patient to talk, but less incoherently. This was a year ago, and the patient continued as melancholic as before; but she talked, if that was any advantage. He had failed occasionally to induce patients to speak by injections of cocaine.

As to the cocaine habit, he regarded it as similar to the tea or coffee habit, and unlike the opium habit. He did not believe there was a single instance of a well-pronounced cocaine habit, the patient being unable to stop it at any time if he chose to do so. If a person were to continue its use for a long time, he should be inclined to look for trouble with the heart rather than with other organs.

Dr. J. B. Mattison, of Brooklyn, could not agree with Dr. Hammond that there was not a cocaine habit. Within a few months he had had seven cases of the cocaine habit under his care—five in physicians, two in druggists. He certainly believed there was such a thing as cocaine addiction. He regarded the drug as most dangerous and destructive of the tissues. In certain cases its action was more unfavorable even than that of morphine. The cases reported in the newspapers he thought were founded on facts. In one instance he had written to a physician asking whether the report was true that a certain doctor had been arrested in the street while under the influence of cocaine. The physician had replied that it was true; that the doctor was a victim to cocaine. He could cite other similar cases. In one instance a physician attempted to write a prescription for a patient, but, instead, wrote for the sheriff to come and take him to jail. The effects of cocaine, so far as he had observed, were similar to those described by Dr. Hammond, but, besides the action upon the heart, the great volubility, and the unrest, he had noticed hallucinations and delusions, but no homicidal or suicidal tendency. In some cases there was marked emaciation. He thought the effects of the continued use of cocaine were more decided than those of the continued use of morphine. The patients whom he had treated had acquired the cocaine habit gradually, making comparatively small injections several times a day. Dr. Hammond seemed to think that no dose was toxic; but the speaker regarded Dr. Hammond's case as exceptional, and he would not advise any physician to repeat the experiment.

Dr. J. Leonard Corning thought there was a morbid fear of cocaine spreading throughout the community, and he thought the remarks of Dr. Hammond were timely, as they would tend to allay the prejudice against a most useful remedy.

Dr. L. C. Gray remarked that between Dr. Hammond on one side and Dr. Mattison on the other there was considerable distance, and he did not know how the question could be solved except by further experience. Dr. Hammond's statement that no cases had been reported by medical men was a mistake. Cases had been reported in Europe, but they were not numerous.

Dr. M. R. Richard said that about six years ago he had a case of despondency in a lady disappointed in love. This was in New Orleans, and a physician there told him that he was in the habit of using an infusion of coca-leaves in such cases. He gave it to this woman with happy results. Three years ago he came to New York and was unable to find any coca-leaves. Taken in this manner, the patient would not be likely to get a sufficient amount of the drug to acquire a habit.

The President read a communication from Dr. C. H. Hughes, of St. Louis, in which he said: "Most of the cases of cocaine habit seen by me have been mixed cases of opium, cocaine, and alcohol or ether inebriety, combined or alternating; though I think I know of cases where cocaine is the chief, if not the exclusive, reliance. But these patients are not reliable in their statements. I have not seen a physician addicted to cocaine who stuck to cocaine exclusively. The finale has generally been cocaine and opium and whisky and ether and all the other neurotic stimulants. Opium is a much more agreeable stimulant, and most patients evidently try to get back to the fatal bliss of opium. I have never relied on cocaine alone in breaking up the opium habit. I never use cocaine to intoxication, and never regularly. My rule with cocaine cases, as I usually see them, is to get them back to plain opium, and then break them of that if advisable." Dr. Hughes also referred to the fact that in some cases cocaine produced poisonous effects.

The President referred to thirteen cases of cocaine habit reported by Erlenmeyer, and to a case reported by Bornemann. The subject, he said, had recently been discussed at the meeting of the Congress of German Physicians and Naturalists, when Dr. Smidt reported some cases of cocaine-morphine habit. The general opinion was that pure cocaine addiction was rare, but that the cocaine-morphine habit was not, and was a very destructive and pernicious habit.

Dr. Hammond did not deny the existence of a cocaine habit; he only maintained that it was unlike the opium habit, for the patient could break it off at will. He was aware that patients addicted to the use of opium sometimes added that of cocaine, greatly to their detriment. As to cocaine being a poison, twenty and even thirty-two grains had been taken without serious results. He differed with Dr. Mattison, who thought it was more injurious employed hypodermically; but the patient came under its influence more slowly when it was taken into the stomach.

Subacute Spinal Paralysis.—The President reported a case for Dr. H. M. Biggs, and exhibited specimens of the cord and sciatic nerve. The case was one characterized by gradual paralysis of the lower and then of the upper extremities, moderate atrophy, afterward a slight anæsthesia of the lower extremities, and loss of the tendon reflexes, but no pain and no bladder troubles. The course was progressive. Death took place in five months. The patient was a man, aged fifty-three, not syphilitic. The interest in the case lay in the rarity of the affection, and especially of cases in which post-mortem observations had been made. Clinically it much resembled the subacute spinal paralysis of Duchenne, although that disease was very rarely fatal. It still more strongly resembled a chronic form of Landry's acute ascending paralysis, and gave support to Ross's classification of (1) Landry's paralysis, (2) the subacute paralysis of Duchenne, (3) periependymal myelitis, and (4) progressive muscular atrophy as inflammatory processes attacking the central gray matter of the cord, and distinguished by the greater or less acuteness of the process. The case was interesting also as showing that these paralyses were not always due to neuritis. Sections of the lumbar and upper dorsal cord were shown, which, the president thought, showed evidences of a low grade of central myelitis. The anterior roots and the sciatic nerve were apparently normal.

NEW YORK SURGICAL SOCIETY.

Meeting of October 25, 1886.

(*Concluded from page 611.*)

Aneurysm of the Obturator Artery (?).—Dr. Lange showed a man, twenty-one years old, who had consulted him two days before on account of pain in the left ischiatic region. On examination, the speaker had found a condition of things to which he would specially call the attention of the meeting. Immediately below the inner half of Poupart's ligament a slight but distinct elevation was to be seen, extending a few inches downward and toward the adductor side of the thigh. Over this swelling an enlarged gland could be distinctly felt, and it seemed to transmit a positive and powerful pulsation synchronous with that of the radial and femoral arteries; and there was a distinct bruit. The femoral artery could be traced quite to the lateral edge of the swelling, but compression of it above Poupart's ligament seemed to have no effect on the pulsation. If, however, pressure was exerted on the tumor itself, deep toward the obturator foramen, the pulsation ceased. The speaker had tried to compress the obturator artery from the rectum, but he was not sure that a large artery that he had felt and compressed was really that vessel; compression of it alone did not seem to have any decided effect on the pulsation in the tumor, but simultaneous compression of the external iliac appeared to stop it, or, at least, diminish it considerably. The speaker was inclined to assume, from the situation of the tumor and its shape, consistence, and other physical characters, that it was an aneurysm fed principally by the obturator artery, but perhaps communicating with the femoral, or one of its main branches. The possibility had occurred to him, also, that it might have been caused by gradual erosion of the artery by a spiculum of bone; for, six years before, the patient had had disease of the left ilium, followed by spontaneous separation of the epiphysis of the femur and the removal of a sequestrum from the ilium by operation, ending in bony ankylosis of the hip joint, for which subtrochanteric cuneiform osteotomy was performed about a year ago.

Dr. Wyeth remarked that if, as Dr. Lange suspected, there was an aneurysm of the obturator artery, the failure of compression of that vessel by the rectum to arrest the pulsation might be explained by assuming that it had two origins—one from the anterior trunk of the internal iliac, and the other from the deep epigastric branch of the external iliac—such as he had seen in several dissections.

Dr. Gerster thought there was a possibility of this condition existing.

Dr. Lange had thought of it, but had felt compelled to exclude the supposition, as the pulsation stopped entirely when pressure was made at a certain point.

Dr. McBurney suggested that the internal circumflex should not be overlooked.

Dr. Lange asked for suggestions as to treatment. In reply to a question by Dr. Stimson, he said that he could give no information as to the rate of the tumor's growth.

Dr. Markoe said that, from the slight examination that he had been able to make, he had not obtained any definite information.

Dr. Sands thought it seemed clear that, if the tumor was an aneurysm, it was not one of the ordinary kind—not one of the femoral artery—but that it involved some branches of the internal or external iliac; if that was the case, and if it was aneurysmal in character, the treatment should be different from that commonly applied to aneurysms in this situation. Under these conditions, an operation involving the internal iliac might be necessary, but he would first try pressure on the internal or the common iliac through the rectum. If, however, operative procedures were decided upon, ligation of the common iliac might prove necessary, and, if the case were his, he would not postpone the operation very long. He should very much dislike to open such an aneurysm, but he had no faith in treatment by medicine.

Dr. Weir asked if Dr. Lange had not said that external pressure controlled the pulsation.

Dr. Lange replied that he had, but that the pressure had to be so intense that he thought the attempt should be made under anæsthesia. If it failed, he should prefer to tie the obturator artery first, for fear the anastomosis might not be perfect enough to supply the limb with blood in case the common iliac was tied. It had seemed to him that the obturator artery wast the chief source of blood-supply to the aneurysm, but he mean to repeat his examination.

Dr. Weir thought that, since pressure at one point arrested the pulsation, he would, before resorting to the method proposed by Dr. Sands, first try external compression, which, under similar circumstances, he had found successful in a case of vertebral aneurysm that he had not long since presented to the society.

Dr. Sands had taken it for granted that the aneurysm was fed from a double source; if it was fed from a single source, he might modify his remarks.

Dr. Stimson thought the patient's youth would suggest that it was not an aneurysm of the ordinary spontaneous kind, with fusiform dilatation, but more probably a pouched sac formed after wounding of the vessel. Such an aneurysm would be suited to treatment by coagulation of its contents, induced by the introduction of coagulating substances; and, therefore, if compression failed, he should prefer such treatment to ligation of the common iliac.

Dr. Sands asked if the insertion of a coagulating substance into the sac would not be a very serious matter.

Dr. Stimson did not think facts had proved that to be the case. He meant solid bodies as well as liquids; such substances had been introduced into intra-thoracic and abdominal aneurysms without causing any serious reaction, although the patients had usually died from the progress of the disease.

Dr. Briddon would prefer electrolysis to any other means than pressure.

Partial Resection of the Elbow Joint.—Dr. Lange showed another patient, who had met with an injury of the arm three months before, which had resulted in ankylosis at an angle of 140°, with but a few degrees of mobility. The head of the radius seemed to be in proper relation with the outer condyle, and the diagnosis was made of oblique fracture of the os brachii, extending into the joint. As there was a large protuberance on the inner side of the joint, which presented the outlines of the trochlea, it was thought that the outer half of the articular surface of the os brachii, together with the bones of the forearm, had been displaced outward, but, when the joint was opened, a different condition was discovered. The condyles were almost normal, but there was an incomplete dislocation of the bones of the forearm, so that the ulna articulated with the capitellum. The external epicondyle was dislocated outward and much thickened. Subperiosteal excision of the lower end of the os brachii was performed, and the wound was entirely healed in three weeks. The patient was now able to move the forearm between the angles of 90° and 160°, and was steadily improving, both pronation and supination being preserved. The after-treatment had consisted of passive motion and exercise, a light jointed silicate splint being worn, with rubber muscles to assist the patient in using those of his arm. [The splint, which the speaker had shown to the society on previous occasions, was then applied, and the method of exercising the muscles and securing further motion was explained.]

Dr. Gerster had used the apparatus himself, and had found it efficient and simple of application.

In reply to a question by Dr. Poore, Dr. Lange said that passive motion was resorted to as soon after the operation as it was possible to do so without exciting inflammation.

Temporo-maxillary Ankylosis.—Dr. Lange then showed a girl, eight years old, who had had scarlet fever and diphtheria when three years old, followed by a discharge from the ears and some impairment of the hearing; and measles at the age of five, followed by increasing stiffness of the jaw. After a time the mouth became tightly closed, and remained so most of the time, although occasionally the teeth could be separated more easily and the hearing seemed to be improved. The girl was admitted into the German Hospital, and it was found that there was slight mobility of the jaw, and that the upper incisors overshot the lower ones to an unusual degree. The lower jaw was abnormally small and turned slightly to the left, so that the middle line of the chin did not coincide with that of the face. The left half of the inferior maxilla seemed somewhat shorter than the right one; this fact, together with a more active state of the muscles on the right side, had led the speaker to assume that the left joint was the one affected. The articulation was exposed, after König's method, by an incision an inch and a half long running along the lower edge of the zygomatic arch, but, notwithstanding the slight apparent mobility, not a trace of the old joint could be found—everything seemed changed into one bony mass, which had to be chiseled away piecemeal. The operation was strictly subperiosteal. Healing was complete in ten days, and at the end of the first week exercises were made use of to increase the mobility of the jaw, which immediately after the operation was not enough to allow of the incisors being separated more than 1 ctm., so that it was thought that the other joint would have to be excised also. The mobility increased very soon, however, and now, about six weeks after the operation, the mouth could be opened about an inch and a quarter.

It was very remarkable that, in spite of the complete bony ankylosis on one side, some slight mobility existed before the operation, although the speaker had observed the same thing in another case.

Dr. Gerster showed a girl, fifteen years old, semi-idiotic and somewhat anæmic, who had been admitted into the German Hospital on the 30th of March, for inability to open her mouth. Her mother stated that, some years before, the girl had had a long-continued illness with fever, in the course of which a swelling of one cheek had developed and pus had been discharged from the mouth. Since then she had been unable to open her jaws at all, and had had to subsist on liquid food. Marked atrophy of the left side of the face was noticed, together with a slight degree of microcephalism, but no paresis of the cranial nerves. The upper and lower incisors were in close contact, and the greatest practicable force did not separate them or move them laterally, even under full anæsthesia. No scars were detected externally or within the mouth, nor was there anything noticeable about the outline of the osseous parts of the maxillary joints. Both masseters were found to form a sharply defined band of normal dimensions, but of very great hardness. As a positive diagnosis of true ankylosis was impossible, it was decided to cut the upper insertion of the left masseter, and, if found proper, proceed to excise the left joint, where the original disease was suspected to have been located, on account of the atrophy of the corresponding side of the face—as a sequela, it was thought plausible, of inflammation. On the 3d of April division of the muscle was effected by an incision along the lower edge of the zygoma. This was not followed by any improvement; consequently a vertical incision was made from the posterior end of the horizontal one, and, a triangular flap being raised, the joint was exposed with difficulty. This was due to the atrophy and to the small size of the head of the inferior maxilla, which, together with the glenoid cavity, was found devoid of cartilage. The head of the bone was removed with a chisel without trouble or mishap, but, the immobility of the jaw remaining unchanged, it was evident that the chief trouble was on the right side. On account of the duration of the operation, it was decided to postpone the excision of the right joint. The wound healed promptly, and on the 29th an incision two inches and a half long was carried from the external meatus of the right ear forward along the zygomatic arch. The temporal vessels being doubly tied, and divided between the ligatures, the region of the joint was exposed, when it was found that a solid and rather massive bony union of the head and coronoid process of the maxilla with the temporal bone had formed. On removing a wedge of very hard, ivory-like bone with the chisel, the jaws could be separated freely at once, so as to carry the incisors 4 ctm. apart. On the 11th of May this wound also had healed, and the jaws could be separated by the patient herself to the distance of 3 ctm.

As to the cause, inflammation had undoubtedly been an important element, occurring in the course of a typhoid fever or an acute inflammatory rheumatism. Whether the hemiatrophy was due to the ankylosis was very doubtful, but it was reasonable to assume that the atrophy of the left temporo-maxillary joint was caused by absence of the physiological motion of the joint. The operation was rational and safe, and had yielded good results in the hands of others, both at home and abroad. The horizontal incision, devised by Bottini and König, had been found to be the better one, although ligation of the temporal artery could not always be avoided. The subject had been discussed at some length at the Fourteenth Congress of German Surgeons.

Dr. Lange thought the difficulty of deciding as to which side the ankylosis was situated on was a point of special interest in these cases.

An Operation for Abdominal Aneurysm.—Dr. Lange presented a specimen of abdominal aneurysm from a patient at the German Hospital, a man about forty-five years old, who was at first treated for syphilis, but with no effect. Finally Loreta's operation was decided upon—namely, the introduction of wires into the sac after laparotomy. The aneurysm enlarged very rapidly, however, both in the epigastric region and about the right kidney. One morning it became apparent that blood had escaped behind the peritonæum and found its way as far as Poupart's ligament. It was then decided to modify the operation by passing a needle through the viscera and into the sac, and introducing the wires through it. The aneurysm had become very much enlarged and the patient very anæmic. At the first operation, fourteen days ago, three metres of wire were introduced through a puncture in the epigastric and lumbar region. No anæsthetic was needed, and the operation caused no disturbance. The swelling gradually diminished in the epigastric region and became harder in the lumbar region. A few days later a swelling appeared near the liver; the needle was again inserted at that point and just above Poupart's ligament. A solution of sodium chloride was infused into the cephalic vein, and the patient bore it well, but the aneurysm gradually grew larger. A second infusion, five days later, caused slight improvement, but all further attempts were desisted from. The patient died of anæmia, twelve days after the first operation. The post-mortem showed the viscera so much displaced that the right kidney was pushed forward and lay near the lower edge of the liver and the ascending and transverse part of the colon, while the stomach was somewhat displaced to the left side. There was no trace of the puncture in the epigastrium or in any of the underlying organs; probably the needle had passed through the left lobe of the liver and into the sac. The aneurysm was situated immediately below the diaphragm, and communicated with the aorta by a long opening on the posterior side of the vessel. The space between the layers of the mesocolon on the left side was filled with blood, but the principal mass was on the right side, where there was a gallon or more. There was erosion of the twelfth dorsal and the first and second lumbar vertebræ. The walls of one of the sacs were quite firm with organized fibrin, and there was distinct evidence of coagulation around the wires, but in the other sac the wires were quite clean. Although the punctures had been made at three different points, it appeared that two of the wires had entered the same cavity. The speaker did not think that coagulation was certain to occur, and he could not say whether the immense clot found in the original sac was produced by the wires or not; but where there had been strong pulsation that pulsation became hardly perceptible two days before death, and the bruit disappeared. He felt confident that, even in so severe a case, if it had been taken in time, rupture of the sac could have been prevented and a cure effected. In reply to a question by Dr. McBurney, he stated that about thirty feet of wire had been used.

Dr. BRIDDON remarked that a like operation had been performed many years ago by the late Dr. Gurdon Buck.

Dr. GERSTER, who had been present at Dr. Lange's operation, thought it much better than Loreta's method, which required the abdominal cavity to be opened. In this case the post-mortem had shown that no irritation was caused by the introduction of the wire.

Meeting of November 8, 1886.

Dr. CHARLES MCBURNEY in the Chair.

Dr. Lange's Patient with supposed Obturator Aneurysm (a description of whose case is given in the proceedings of the preceding meeting) was shown again, and stated that both the pain and the swelling had disappeared during the night after the examination to which he had been subjected at the meeting, and had never returned. Dr. Lange knew of no other plausible explanation than that of a sudden obstruction of the main vessel.

Dr. SANDS could not otherwise explain the occurrence. At the time of the last meeting there had been difficulty in discovering the tumor, but it certainly had existed, and it had been the general opinion that it was a true aneurysm of some one of the branches of the femoral or the internal iliac. He was reminded of a similar occurrence that had happened at the Roosevelt Hospital about twelve years ago. A man who had a well-marked pulsating aneurysm of the left axillary artery complained of sudden pain in his left arm, whereupon it was found that no pulsation could be felt in either the radial or the ulnar artery of that side, on account, it was supposed, of a large clot having been displaced from the sac and lodged in the upper part of the brachial artery. The aneurysm ceased to pulsate, and at the end of six weeks was entirely cured.

Dr. STIMSON remarked that the history of aneurysms indicated that the coagulated blood could hardly disappear in so short a time.

In reply to a question by Dr. Sands, Dr. LANGE said that he had at first had some difficulty in finding the aneurysm, and that it had been only by severe pressure on the obturator artery that he had been able to detect pulsation at all.

Lymphangeioma of the Scrotum.—Dr. LANGE showed a boy, sixteen years old, whose scrotum had begun to enlarge a year before. When the speaker first saw him, on the 2d of October, it had attained the size of two fists. At times, little vesicles formed on the surface and, bursting, discharged a clear fluid; and this was followed by some diminution of the size of the scrotum. No application had any particular effect, and the swelling was increasing steadily. There were numerous elevations, varying in size from that of a grain of sand to that of a small bean, which close examination showed were made up of vesicles with clear, watery contents. Some of them were wart-like, and others were flat. On the lower part of the side of the scrotum a fine network of distended lymphatic vessels could be distinguished, clearly differing from the neighboring veins by their transparency. The skin and subcutaneous tissue of the scrotum seemed much thickened, and the dragging of the scrotum had made the pendulous portion of the penis almost invisible. There was some fluid in the tunica vaginalis of either side. There was a similar flabby swelling of the right leg, making the leg look cylindrical, and consisting apparently in a thickening of the subcutaneous tissues, which the boy said he had had from infancy. The scrotum had been curtailed three weeks before the meeting, and Volkmann's operation for hydrocele done on both sides at the same time. But little blood was lost, as two needles were passed crosswise at the neck of the scrotum, and an elastic ligature was wound around above them. The edges of the tunicæ vaginales were stitched together, leaving a common opening in the integument leading to both, but it was only with some tension that the remaining skin could be drawn together over the testicles. Here and there on the new scrotum there were still some watery vesicles to be seen, and the speaker intended to make numerous punctures with Paquelin's cautery.

Trigger-Finger.—Dr. ABBE presented a girl, ten years old, in whom, on her closing the right hand and then opening it, all the fingers were straightened except the little one, which remained flexed, but could readily be straightened with the other hand. In this case, as in one other of the five cases that he had seen in all, there was a nodule on the flexor tendon; all of them had shown a slight thickening of the sheath. In one case the treatment had consisted in encircling the middle of the finger with a band, to prevent it from closing to the catching-point; and by thus preventing irritation of the node in the sheath of the tendon, the finger had been perfectly restored to its normal condition. He was now trying the same treatment in the other cases.

Dr. STIMSON called attention to the facts that the patient could close the distal and middle phalanges without locking the finger, and that the locking was only at the metacarpo-phalangeal joint. He could not see at once how the locking of a tendon could account for that state of things, and he asked if any displacement of the joint surface had been noticed.

Dr. ABBE had not noticed any, but thought there seemed to be a little protuberance which caught on the rim of the metacarpal bone. The nodule could be felt during extension, but less distinctly, and it did not seem to be directly over the joint. Operations had been performed for this condition, but they had not been satisfactory. Nélaton had at first thought that the cause was a thickening of the sheath of a tendon, but in his later papers he had alluded to a foreign body as the cause.

Enlargement of a Limb from Lymphatic Obstruction.—Dr. WEIR showed a photograph of a young girl whose right thigh, and afterward the leg, had become enlarged so that the difference in the circumference of the two limbs was six inches in the thigh and two inches and a half in the leg. The skin was now slightly irregular, and the upper part of the thigh was studded with little prominences which gave issue to lymph freely on being opened. Nothing abnormal was to be felt in the abdomen. He had first seen the patient in 1883, when she was twelve years old; the enlargement had then existed for a year. He ordered an elastic bandage, and it was used for over a year, but without benefit.

Varicose Lymphatic Tumors.—Dr. WEIR showed a tumor, or rather two tumors, removed from a man, twenty-two years old, who had lived in the West Indies, and had suffered from pain in the upper and inner aspect of the thigh and the scrotum for four years. Extending slightly above Poupart's ligament and nearly four inches below it, there was a tumor, soft, irregularly outlined, and of uneven surface, which subsided when the patient lay down, to reappear on his resuming the erect posture, and transmitted the impulse when he coughed—so that it closely simulated a hernia. It was associated with a mass having like features, situated in the left inguinal canal, and reaching nearly to the testicle. In the center of the femoral tumor, which was some five inches broad, there were several small nodules, that were at first taken for fatty masses of omentum, but, on isolating them, it was found that they could be made perceptibly smaller by pressure, and dilatation of lymphatic vessels was diagnosticated. A vertical incision exposed the growth, and it was seen to consist of a number of lymphatic vessels, mostly situated outside the fascia lata, but closely adherent at the saphenous opening to the femoral vein and artery, requiring careful dissection for their separation. When the lymphatic vessels were divided, a free drainage of milky lymph took place. Through the same incision, prolonged upward, after the femoral collection had been removed, and after final ligation of the main enlarged lymphatic vessels, the inguinal canal was opened, and another set of varicose lymphatics was removed, of the size of one's thumb. Nothing abnormal was felt on abdominal palpation. The patient made a prompt recovery.

Banks's Operation for Hernia.—Dr. Peters read a paper entitled "A Mirror of Hospital Cases," containing the histories of two cases of hernia in which he had performed this operation. [See page 629.]

Dr. Gerster remarked that a very similar operation had first been performed by Czerny, to whom he thought the precedence belonged. As to ether causing vomiting, he would mention the case of a very fat man who had been admitted into the German Hospital with a massive scrotal hernia, the inguinal opening being large enough to admit a fist. He bore ether very badly, although a hypodermic injection of morphine had been given him before its administration was begun; he coughed and choked so incessantly as to make it impossible to proceed with the operation. When chloroform was substituted for ether, the respiration at once became quiet, the cyanosis disappeared, and the operation went on without interruption.

Dr. Lange asked if any one present had had experience with Macewen's operation for hernia, in which the sac was pushed back into the preperitoneal space, and the pillars of the ring were closed in a valvular manner. He had performed it three times, but the cases were so recent that he could give no definite opinion of its value.

Dr. Weir had done it a few days previously.

Dr. Lange had used silk sutures in one case, silk-worm gut in another, and catgut in the third. In reply to a question as to whether the catgut had not given way, he said that thus far (at the end of the third week) there had been no trouble, but he added that it had been against his better judgment that he had used the catgut, nothing else being at hand.

Dr. Weir preferred catgut, as he thought the wound would heal without any trouble. In his experience it was only exceptional that the wound closed over silver or silk.

Dr. Lange had not used silver wire; he preferred silk-worm gut.

Dr. Weir had tested catgut, and found that it would last nearly two weeks.

Dr. Abbe had used silver wire in three cases, and it had caused ulceration, although he had used great care. In one case suppuration had occurred, but the wound had granulated over the wire. The use of silver wire was Banks's only modification of the German operation.

Dr. Wyeth asked Dr. Abbe how many of his patients (over forty in number) had been really cured; how many had been able to go without a truss.

Dr. Abbe replied that about a third or a quarter had had a recurrence at the end of two years, the majority going from a year to two years; he thought that with a light truss they would be able to attend to their duties for many years. It was noteworthy that the femoral hernias were almost invariably cured, while the inguinal were more difficult to cure. It was after the operation for femoral hernia, he thought, that patients could often go without a truss.

As to this matter of recurrence, Dr. Weir thought that the method of leaving the wound open, filling it with iodoform gauze, and allowing it to heal from the bottom, would give better results. His own experience for the last two years had been to this effect, and he had been led to place still greater reliance on the open method since it had also been recently advocated by Nussbaum, who left the wound open and used the actual cautery freely.

Dr. Wyeth said that, of the hernias on which he had operated for radical cure—about twenty in all, some strangulated and others not—he really could not say positively that more than two had been cured.

(*To be concluded.*)

Book Notices.

An Introduction to General Pathology, founded on Three Lectures delivered at the Royal College of Surgeons, London, 1886. By John Bland Sutton, F. R. C. S., Sir Erasmus Wilson Lecturer on Pathology, Royal College of Surgeons, etc. Philadelphia: P. Blakiston, Son, & Co., 1886. Pp. xvi–390. [Price, $4.50.]

This author has produced a very readable book, in which he has endeavored to apply the fundamental principles of the doctrine of evolution to a collection of facts, with the view "to show that the same laws which regulate physiology rule pathology"; that "structural peculiarities pathological in their origin have been transmitted as rare characteristics in more than one group of animals"; and that, "as man in his bodily structure is kindred with the brutes, so he shares with them, and they with him, the liabilities to disease, inherited and acquired."

In these lectures he has used human pathology as a skeleton, and upon it has placed the morbid changes noticed in animals, in the belief that they illustrate the following laws: (1) "There has been an excess of development of some parts in relation to others"; (2) "certain parts have undergone complete or partial suppression"; and (3) "certain parts which were originally distinct have coalesced."

The first of these laws he illustrates by the fact that "every vertebrate possesses at some period of embryonic life male and female organs, yet usually one set gains the ascendancy"; "the disappearance of the opposite set of organs" illustrates the second law; and the fusion of certain ducts, as of "the oviducts in most mammalia, constituting a median uterus," illustrates the third law.

Applying these laws to certain facts found in comparative pathology, the argument stands; given certain pathological conditions in animals, these have been utilized by the animals, have been retained, and have been transmitted in accordance with the laws of heredity. Therefore the horn upon the nose of the rhinoceros, the castors upon the inside of the forelegs of the horse, once pathological, have been found useful and have been retained.

For the skeptical the argument is not so clear as may be desired, notwithstanding the author makes the pertinent statement that "there is no valid reason why it is not true." Aside from the argument, however, the book contains numerous interesting notes of cases and much valuable information, arranged under the headings Aberrations of Nutrition, Inflammation and its Results, Cystomata, and Neoplasms, accompanied by one hundred and forty-nine illustrations. It will be interesting chiefly to advanced students in pathology, and, for an introduction, occupies an exalted position.

L'année médicale (huitième année), 1885. Résumé des progrès réalisés dans les sciences médicales. Publié sous direction du Dr. Bourneville, Médecin de l'hospice de Bicêtre, etc. Paris: Plon, 1886. Pp. viii–421.

It is difficult to criticise a work of this kind. Medical journal literature has grown to such dimensions nowadays that any endeavor to cull and abridge the most important articles from the vast field that a year covers requires great judgment and impartiality. It is doubtless on this account that some important omissions are generally to be noted in books of this character. In this instance we miss Ewald's article on the physiology and pathology of digestion and Buzzard's on peripheral neuritis. The subject-matter has been well arranged, and the index adds materially to the value of the book as a work of reference.

GENERAL LITERARY NOTES.

Among recent foreign publications we note the following:

J. & A. Churchill, London.—C B. Fox, "Sanitary Examinations of Water, Air, and Food." 2d ed. —— J. M. H. Martin, "Ambulance Lectures." (2*s.*) —— E. Ellis, "Diseases of Children." 5th ed. (10*s.*) —— G. Wilson, "Handbook of Hygiene." 6th ed. (10*s.* 6*d.*) —— C. Heath, "Minor Surgery." 8th ed. (6*s.*)

M. Perles, Vienna.—J. Hirschfeld, "Galerie berühmter Kliniker und hervorragender Aerzte." New ed. (16*M.*)

Direzione dello "Sperimentale," Florence. — L. Vanni, "Le nozioni di semejotica." Part 1, a. (3*l.*)

Bailly-Baillière, Madrid.—E. Nettleship, "Guia Práctica de las Enfermedades de los Ojos." 3d ed., transl. by F. García Molinas. (5*pes.*) —— Jaccoud, "Tratado de Patología Interna." 4th ed. —— Dujardin-Beaumetz, "Lecciones de Clínica Terapéutica." 2d ed., transl. by G. Réboles y Campos. (6*pes.* each vol.) —— Dujardin-Beaumetz, "Las Nuevas Medicaciones." 2d ed., transl. by G. Réboles y Campos. (6*pes.*)

"Cosmo Editorial," Madrid.—S. Jaccoud, "Lecciones de Clínica Médica." Transl. by F. J. Santero. (12*pes.* 50.)

Moya, Madrid.—G. Lozano, "El Problema de la Rábia."

"Revista de Medicina y Cirujía Prácticas," Madrid.—J. E. Erichsen, "La Ciencia y el Arte de la Cirujía." Transl. by Benavente and Ribera.

"Revista Médica," Madrid.—Espina y Capo, "Consideraciones Generales acerca del Cólera." (1*pes.* 50.)

"Revista Médica," Seville.—Bourneville y Bricon, "Manual de las Inyecciones subcutáneas." Transl. by F. F. Lopez. (2*pes.* 50.)

T. Saenz, Seville.—A. Strümpell, "Tratado de Patología y Terapéutica de las Enfermedades Internas." Transl. by J. Madera; preface by B. Robert; chapter on cholera by Ferrán and Paulí. (17*pes.* 50.)

R. Serret, Madrid.—J. Grosser, "Novísimo Formulario de Bolsillo." Transl. by R. S. Comin and F. Pería y Manga. (3*pes.*)

BOOKS AND PAMPHLETS RECEIVED.

Transactions of the American Surgical Association. Volume the Fourth. Edited by J. Ewing Mears, M. D., Recorder of the Association. Philadelphia: P. Blakiston, Son, & Co., 1886. Pp. xxiii–339.

Notes on the Sanitary and Climatic Conditions of Southern California. By W. M. Chamberlain, M. D., etc. [Reprinted from the "Medical Record."]

Diseases of Tropical Climates. Lectures delivered at the Army Medical School. By William Campbell Maclean, M. D., C. B., Surgeon-General, late of the Indian Army, etc. London and New York: Macmillan & Co., 1886. Pp. ix–340. [Price, $3.]

Eighth Annual Report of the State Board of Health of Illinois, with an Appendix.

Address in State Medicine. Delivered at the Thirty-seventh Annual Session of the American Medical Association, in St. Louis, on May 6, 1886. By John H. Rauch, M. D. [Reprinted from the "Journal of the American Medical Association."]

Miscellany.

The Society for the Relief of Widows and Orphans of Medical Men.—It appears by the annual statement for the year ending August 7, 1886, that the total assets amount to $154,211.60, being $3,256.85 in excess of those for the preceding year; $4,677.36 were distributed to annuitants during the year.

A Warning.—A physician living in Lexington Avenue writes us that several small articles have been taken from his house by a well-dressed woman, about twenty-eight years old, vivacious in manner, and somewhat hard of hearing, who said that, by the advice of a well-known practitioner on the West Side, she had come to ask him to take charge of her paralyzed mother.

The "Transactions of the Texas State Medical Association" at its eighteenth annual session, held at Dallas on the 27th, 28th, 29th, and 30th of April, 1886, have just been issued in the form of a handsome volume of nearly seven hundred pages. The papers read at the meeting are for the most part very meritorious, and, in particular, the reports made to the various sections strike us as of more than ordinary value. We regret to learn that the secretary died during the preparation of the volume, but we congratulate the association on the appointment of so energetic and capable a successor as has been found in Dr. Daniel, of Austin.

THERAPEUTICAL NOTES.

Lycopus Virginicus in the Treatment of Venomous Bites and Stings.—Dr. J. R. Briggs, of Fort Worth, Texas ("Trans. of the Texas State Med. Assoc.," 1886), calls attention anew, having mentioned the matter before in his graduation thesis, to the efficiency of *Lycopus virginicus*, commonly called bugle-weed (the charm-weed of the Indians), in the treatment of the effects of the bites and stings of venomous reptiles and insects. "Any one," he says, "who has attended the fairs and other gatherings held throughout Georgia, Tennessee, and Kentucky during the egress of the Indians from that country doubtless remembers that on such occasions there were many Indians who would, with impunity, allow the poisonous rattlesnake to bite them. It was observed that, in order to counteract the effects of this poisonous reptile, they masticated large quantities of the bugle-weed and swallowed the juice. That the bugle-weed was the identical weed used at the time, I have absolute proof." He then gives a brief account of the case of a man who was suffering severely from the effects of the sting of a large centipede. Ordinary stimulants, such as whisky and ammonia, having produced no perceptible results, Dr. Briggs gave a decoction of bugle-weed (made with an ounce of the plant to a pint of water, a small quantity of alcohol being added to preserve it) in tablespoonful doses every hour, and applied it on linen cloths to the trail of the insect on the patient's abdomen, extending from the crest of the ilium to the umbilicus, an inch wide, of an erysipelatous redness at first, afterward black, roughened, and elevated. The man became comfortable in four hours, and was able to attend to his business at the end of three days.

The Abortive Treatment of Gonorrhœa.—In an interesting pamphlet on "The Treatment of Gonorrhœa and its Sequelæ," Dr. Charles L. Mitchell, of Philadelphia, remarks that the great objection to the abortive method of treatment is that it may convert a mild attack into an acute and exceedingly severe one. It always, he says, creates intense inflammation, often resulting in hæmorrhage, and frequently leaves organic stricture as a result. Its use is to be discountenanced; a much better method is to employ soluble bougies medicated with some germicide or antiseptic, which either neutralize or modify the action of the specific virus.

Original Communications.

A CONTRIBUTION TO THE CLIMATOLOGICAL STUDY OF CONSUMPTION IN PENNSYLVANIA.*

By WILLIAM PEPPER, M. D., LL. D.,
PHILADELPHIA.

(*Continued from page 624.*)

While, however, the evidence is thus meager and conflicting in regard to the influence of local conditions upon the origin and prevalence of consumption in various parts of the State, the responses to Question 22—"Is consumption, as you see it, caused or permitted by hereditary influences, and in what percentage of cases?"—are strikingly uniform. This question is answered more or less fully in 94 of the communications I have received; in 87 the reply is affirmative; in only seven instances does the writer deny the existence of heredity in his cases of consumption. The percentage of cases in which heredity has been noted is stated in 31 replies. Only once is it given as low as 25 per cent., 6 times as 50 per cent., 12 times at from 60 to 75 per cent., 7 times at from 80 to 90 per cent., and as existing in every case in three replies. This concurrence of belief in the great power of hereditary influence upon the development of consumption is, of course, in accord with general belief, though I confess it is more uniform and positive than I had expected to receive.

As bearing upon the current discussion of the contagious or infectious character of consumption, the replies to Question 24 are interesting. This question was, "Have you any evidence in support of or against the contagious or infectious character of consumption?" There were 45 affirmative replies.

Dr. William D. Bailey, of Dillsburg, York County, relates an instance in which a house had been built in an excavation in a hillside and which had a small yard on the east and south; this yard is always damp. As the house is in the shape of the letter L, little or no air can sweep through it; neither do the rays of the morning sun reach it until high up.

> "In this house I have attended two cases of consumption—sisters. Both terminated fatally; the eldest died after suffering about three years; the younger slept with her, and soon after her death took it and died in about five years after. I observed what I thought alarming symptoms in a third sister, but forbade her sleeping with the affected sister, and now she is in reasonably good health. I can trace no hereditary taint in the family."

Dr. C. B. Wood, of Monongahela City, Washington County, Pa., is a firm believer in the contagious character of consumption, and offers the following evidence:

> Case I.—Three children in a negro family died of consumption, all under twelve years of age. The father and mother died of the same disease a few years later.
>
> While the children were sick and dying, a robust young man—negro—whose parents are strong, healthy people, boarded with this consumptive family, during which time he was taken sick, and in his case were present all the symptoms of consumption excepting hæmorrhage and those symptoms found after there is an actual destruction of lung-tissue. He was sick about three months, was greatly emaciated, and I thought must surely die, but he recovered, and is strong and healthy to-day, after five years.
>
> *Treatment.*—Change of boarding place, cod-liver oil, syr. hypophos. cp., rich milk, and a little good whisky.
>
> Case II.—A young woman aged twenty-six, unmarried, came to her aunt's to live, or rather to die, as she was in the last stages of consumption.
>
> A cousin of the consumptive slept with her. After several weeks' attendance I was asked to see the girl (whose age was eighteen). She complained of pain in apex of right lung, had a cough, had been having night-sweats, loss of appetite, and physical signs of disease in the lung.
>
> I at once ordered her not even to stay in the same room with the consumptive, placed her under treatment, and she recovered and is living to-day in good health.
>
> Case III.—Mr. A., a farmer, died of consumption. His wife, whose family history was excellent, was taken sick shortly after her husband's death, and died of consumption within two years.
>
> Case IV.—Now under my care. Young woman, married four years ago. Husband had hæmorrhages previous to marriage. Two years after marriage went to Mexico to practice medicine, was taken worse, and died of consumption. The wife was with him probably two and a half years altogether of their married life. Her history on father's side not very good, on mother's side excellent. But, when I remember what a picture of health she was previous to marriage, I can not but believe that her husband at least caused the development of her present disease, consumption, if latent, if he did not sow the seed. She spent the last two winters in Boston, and is now in Monongahela City with her mother. Her present condition is alarming, and she is now undoubtedly in the second stage of consumption.

Dr. J. J. Koser, of Shippensburg, Cumberland County, relates a case in which consumption occurred in a lady thirty-six years of age, apparently contracted by nursing a relative of her husband's, who died of consumption about a year before she consulted Dr. Koser. She was then moderately far advanced in disease. She had no history of consumption in her family, but, on the part of her husband's family, there was a history of consumption, and, about a year and a half after death of the wife, the husband died of the same disease. They had three children who are apparently healthy at the present time.

Dr. Carr, of Schuylkill County, writes:

> "I have known several women who were married to consumptive men, and several men who married consumptive women. The children on both sides were apparently healthy till they began to arrive at the age of puberty, when they showed signs of consumption, thus showing an hereditary taint; the parents who were healthy being in good health, while those that were suffering from consumption have died; and many of the offspring died of well-marked consumption, in its acute form, as they arrived at the ages of eighteen or thereabouts."

Question No. 19—"Is consumption specially prevalent or specially rare among any class or race—especially Americans, Jews, negroes—or any occupation?" Twenty-five stated that no class was specially affected, or that all classes were equally affected; 21 stated that the disease attacked chiefly Americans; 14, negroes; 5, Irish; 2, Germans; 3, Swedes; 1, Indians (Carlisle); 4, miners; 3, axe-grinders; 2, cotton-factory operatives; 1, stone-cutters.

PHILADELPHIA.

More careful attention has been paid to Philadelphia, because here alone has it been possible to secure such data as are required for an intelligent study of the distribution of consumption.

It is to be hoped that, if this report contributes to nothing else, it will aid in bringing our authorities to appreciate the lamentable absence of all careful records of mortality outside of this city. Even in Pittsburgh the mortality returns, which were secured through the courtesy of Dr. W. H. Mercur, are defective in not giving reports from the individual wards, though in other respects interesting and valuable. And in not one of the smaller cities have I been able to learn that complete mortality returns are regularly printed and published. I have even been assured by my correspondents, in some cities of 50,000 to 70,000 inhabitants, that it is entirely possible for a corpse to be interred without a physician's certificate as to cause of death, and without official registry of burial.

In approaching the study of consumption in Philadelphia, several tables were prepared, which are given in the appendix. During the past twenty-six years the mortality from phthisis in this city has been about 60,000 out of a total mortality from all causes of about 400,000. The uniformity with which the rate of 14 per cent., as that of the proportion of deaths from phthisis to total mortality from all causes, is maintained year after year is remarkable.

Table No. 2 shows the proportion of the deaths from consumption occurring at different periods of life.

The same excessive mortality from this disease among negroes, which is noted at every part of the State where any considerable number of this race reside, is conspicuous in the returns from Philadelphia. The total mortality of negroes from phthisis during the past twenty-four years has been 4,327, while the average annual negro population during this time, of about 25,000, would have yielded a mortality from consumption of only 1,900 deaths were the rate the same as among the rest of the community. The mortality returns are not sufficiently minute to enable any statement to be made as to the mortality of the various individual foreign elements which contribute largely to our population. In 1880 the deaths from phthisis among the foreign-born were 1 in 266. To state the case in another way: In the foreign population the mortality from phthisis for twenty-five years has been 18,189, whereas the average death-rate from phthisis, as determined from the whole community, would have rendered 15,125 the proper total of deaths from phthisis for the foreign-born. It is evident that, if the deaths from phthisis among negroes and among the foreign-born were deducted from the total, the mortality from this cause among the white native-born citizens of Philadelphia would appear truly as being much smaller than is commonly regarded.

The deaths from phthisis among the native white population are 9·3 per cent. of the total mortality, and, excluding negroes and foreign-born, there is one death from this disease in every 506 of the population.

It has been found impossible to obtain complete statistics as regards the mortality from phthisis among the Jews, a point of considerable interest in consequence of the prevalent notion that this race is remarkably exempt from that disease. I am indebted to the kindness of Dr. Isaac Leopold for the following figures, which give the burial records for the past ten years of a Jewish cemetery and of a Jewish beneficial society. They show that, of 611 deaths, 58, or 9·5 per cent., were due to phthisis, while in the entire community the proportion is 15·4 per cent.

A chart has been prepared by Dr. Hinsdale showing the relation which the mortality from phthisis in Philadelphia in each ward, during the years 1860, 1870, and 1880, bears to elevation and density of population. The position of the wards is noted as to river frontage, rural districts, etc.

It is remarkable that the greater mortality from phthisis coincides with low elevation and greater density of population. Another table shows that the wards where phthisis is more frequent are supplied with water from the poorer pumping stations.

In an article on "Consumption in New England," by Dr. E. P. Hurd, of Newburyport, Mass., published in the "Boston Med. and Surg. Jour.," March 29, 1883, several interesting facts are brought out. In Newburyport, during twenty-five years, there has been an average population of 13,500. It is the type of an old seaport and fishing town, having a nearly stationary population of an old American ancestry. It is cold and chilly. During this period the deaths from phthisis were one sixth of the total mortality, or one in 285 of the population. He shows that in 1880, among those of American parentage, there was one death in 351; among those of foreign parentage, one in 136.

Dr. J. Curtis, in a study of phthisis in Boston made forty years ago, found that between 1821 and 1848 the deaths from phthisis were to total deaths as 1 : 5·76.

Hayward found that in New York city between 1820 and 1850 the ratio was 1 : 5·54, or 18 per cent. of the total mortality.

Dr. E. M. Snow found that in Providence, R. I., between 1840 and 1854 the deaths from phthisis were one in 209 of total population; between 1856 and 1881 they were 16·69 per cent. of the total mortality, or one in 317 of the total population. He also shows that in 1880, among those of American parentage, there was one death in 435; among those of foreign parentage, one in 268.

The ratio in Philadelphia in 1880 was one in 316 of the total population, which, it is to be borne in mind, is by far the worst ratio found in Pennsylvania. The deaths from phthisis are 15·4 per cent. of the total mortality.

I am also able, by the kindness of Dr. Mercur and of Dr. Snively, of Pittsburgh, to include among these statistics the very careful records of the mortality from phthisis in that city. They extend from 1875 to 1886, and show that this disease is not so frequent in Pittsburgh as it is in Philadelphia.

Calculations from these statistics show that the deaths from phthisis during eleven years were 9·2 per cent. of the total mortality. There was, in the year 1880, one death from consumption for 497 persons living. The corresponding figures for Philadelphia are 15·4 per cent. and 316 persons living for one death from phthisis.

Among the foreign-born in Pittsburgh there was one death in every 327 persons living; among the negro population there was one death for 367 persons living.

SUMMARY OF REPLIES FROM 120 PRACTITIONERS IN 47 COUNTIES OF PENNSYLVANIA.*

BERKS COUNTY.—Two replies. Mohnsville; population, 500. Sheltered. West winds prevail. Air cool and damp. Fogs occur occasionally. It is a town with many shade-trees. There are ponds, meadows, hills, and valleys. The soil is of medium quality. There is a considerable fall of temperature at night. The people are engaged in farming and in factories, and are chiefly American and German. Phthisis is rare. There has been only one death from phthisis in four years in this town. It assumes a chronic course and is hereditary. There is no malaria, and only occasionally rheumatism, pneumonia, and Bright's disease.

Reading; population, 43,278 (1880); elevation, 280 feet. Sheltered and warm. The air is warm and dry. Fogs are rare. There is not much shade outside the town, but there is abundance in the streets. No trees have been cut down for health. The rock is limestone and there are many fissures providing ready underground drainage. There are deposits of clay. There are few marshes. There are hills to the east and south. No marked changes in temperature. The population is mixed, and is engaged chiefly in factories. Consumption is moderately prevalent, and possibly more so in the newer districts. Cotton-factory employees and marble-cutters are especially prone to phthisis. The disease usually runs a chronic course. There is one death from phthisis for 389 persons living. The general death-rate is 15·8 per thousand. Phthisis is both caused and promoted by hereditary influences in the majority of cases. Malaria is prevalent, but has no relation to phthisis except as it may bring about "consumption from congestion." No prevalence of pneumonia, rheumatism, or Bright's disease.

BUCKS COUNTY.—Three replies. Falls Township; elevation, 40 feet. Sheltered. Northwest and southwest winds prevail. The air is warm and dry; fogs occur. Rain-fall, 42 inches. Snow, 30–40 inches. Little shade. There are meadows. Soil, clay and gravel; of medium quality. No marked atmospheric changes. The people are of American descent and engaged in farming. Consumption is rare. There is a house where consumption has been especially prevalent; it is a stone house on a dry knoll with little shade. The disease is chronic, and the reporter's cases are in females chiefly. Seventy-five per cent. are hereditary. Malaria is prevalent, but consumption is not specially prevalent in malarial districts. Rheumatism is prevalent. Pneumonia and Bright's disease are not.

New Britain; population, 150. Sheltered. West winds prevalent. Soil very rich, sandy, and well cultivated. Northeast winds troublesome to consumptives. No great atmospheric changes. People engaged in farming and of American descent. Moderate amount of consumption. The disease is usually chronic; most cases are hereditary, the exciting cause being malaria in nearly every case. In two cases attendants contracted phthisis. Malaria is prevalent. Rheumatism, pneumonia, and Bright's disease are not.

No. 3. Point Pleasant; population, 300. In a sheltered position on the Delaware River. Fogs occur. There is abundant shade. There are hills and valleys. Soil of medium quality. East winds troublesome to consumptives. No marked atmospheric changes. The people are Americans, Germans, and Irish, and are engaged in farming and lumbering. The disease is usually acute; it is hereditary, but skips generations; it may be propagated from husband to wife. Malaria occasional. No prevalence of pneumonia, rheumatism, or Bright's disease.

CHESTER COUNTY.—Five replies. Three reports from West Chester; population, 8,000; elevation, 412 feet; exposed; mean annual temperature, 50°. Northwest and southwest winds prevail. The air is dry and there are few fogs. Rain-fall, 48·4 inches. Small amount of snow. The streets are well shaded, but there are no woods near. The soil is a loam from decomposed igneous rock. There is clay. There are swamps, but the land is generally well drained; but few sewers. The soil is rich. Southeast winds are troublesome to consumptives. There is no great liability to sudden atmospheric changes. There is a great fall of temperature at night. The people are engaged in farming. Consumption is moderately prevalent. It pursues a chronic course, is hereditary, and is frequent among negroes. The reporter thinks the disease is contagious. No prevalence of malaria, rheumatism, pneumonia, and Bright's disease.

Another report from West Chester says that east winds trouble consumptives the most, and that there is no great fall of temperature at night; also that phthisis is not prevalent, but that a few houses in the country that are low and shaded seem to be particularly associated with phthisis. The reporter, Dr. Jacob Price, has known cases cured by removal to elevated western localities; he says heredity is a strong factor, and that contagion occurs; on the other hand, that liberal diet and out-of-door life may prevent the disease in children predisposed to it.

A third reporter estimates the hereditary cases at 25 per cent., says the disease is not specially prevalent, and believes in contagion.

No. 4. Unionville; elevation, 350 feet. Sheltered, warm and cold. West winds prevail. Atmosphere is variable. The soil is good and is on a Silurian and Laurentian base. There are ponds, meadows, hills, and valleys. East winds are troublesome to consumptives. There are sudden atmospheric changes. The people are engaged in farming and are of American descent. Phthisis is rare; it is chronic; hereditary in 75 per cent. No malaria. Rheumatism is prevalent. Pneumonia is not prevalent. There are a few cases of Bright's disease.

No. 5. Springfield; elevation, 557 feet. Exposed and cold. Fogs occur. It is not shaded. Soil is good and is clayey. Marked changes in temperature. Occupations are farming and mining. Consumption is rare. No part of town or house is liable. The disease is both acute and chronic. East winds trouble consumptives. Ninety-five per cent. due to heredity. Children can be protected by good hygiene. No evidence in support of infection. No malaria. Little rheumatism and pneumonia or Bright's disease.

ERIE COUNTY.—Erie; population, 27,730; elevation, 573 feet. One annual death from phthisis in 433 inhabitants. Situation exposed. Mean annual rain-fall, 42 inches. Mean annual temperature, 49·3°.

FRANKLIN COUNTY.—Three replies. No. 1. Greencastle. Consumption is rare. In over 1,200 patients the reporter has only 15 cases of phthisis, 3 of which had hereditary taint. No part of his town peculiarly liable to the disease. The employment is farming. Americans and negroes, with a few Irish and Germans, suffer. No particular houses are afflicted, unless in cases of decided humidity. Course is always chronic in his practice. Phthisis is hereditary, but in 20 per cent. of his cases (three cases) there was no heredity, the cases occurring in girls at puberty. He states that disordered menstruation is the most common cause of the disease where no heredity exists. He has never seen the disease in males without heredity. He has never seen it prevented, and knows of no reason for believing it to be contagious. Malaria is not prevalent. Rheumatism is quite prevalent. Pneumonia not prevalent, nor Bright's disease.

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* I take this opportunity to express anew my sense of obligation to the numerous correspondents whose valuable replies to my circulars and letters can not be adequately presented here.

No. 2 writes from Upton; population, 165; elevation, 693 feet. It lies in an exposed, cold situation. Atmospheric changes are great. Employments are agricultural and mechanical. Citizens are Americans for several generations. Consumption is rare, and no part of town is peculiarly liable. There is one house in which a whole family have died from this malady, hereditary influences and other unsanitary causes being present. Consumption does not affect any class or nationality in particular, and the disease is as often acute as chronic. No cases have been affected by going from or coming to the town. Fifty per cent. of cases are due to heredity. Reporter has no doubt that children with hereditary influence can be saved by hygienic precautions. Has no evidence as to infectiousness. No prevalence of malaria. Rheumatism is frequent. Pneumonia not very frequent. No prevalence of Bright's disease.

No. 3. Chambersburg; population, 9,000; elevation, 605 feet. Sheltered; temperature moderate. Northwest winds prevail. Air signally moist; not foggy. Limestone. Soil good. Phthisis not very prevalent. Not liable to sudden changes from heat to cold. Trades, factories and farming. Americans, Germans, and negroes form the population. No part of town is peculiarly liable. There have been particular houses afflicted; hereditary influence present; surroundings good. The disease occurs most in negroes and mulattoes, and among these is very fatal and rapid. Runs chronic course in whites; acute in negroes. Patients have had hæmorrhages here, have gone to Colorado, and have recovered; on returning, been ill again; but, on going West, have recovered. Seventy-five per cent. due to heredity. Can be prevented by hygienic measures. *Has plenty of evidence of infection.* Thinks it much more frequently contagious than is generally believed. No prevalence of malaria, rheumatism, or pneumonia.

No. 4. St. Thomas; population, 550; elevation, 800 feet. Town is dry. No sudden changes from heat to cold. People farmers; of American descent for several generations. Consumption is prevalent. No parts of town or houses are peculiarly liable. It is not more prevalent in one race than another. It runs a chronic course. No cases have been caused by coming to town. It is promoted by hereditary influence. No prevalence of malaria, rheumatism, pneumonia, or Bright's disease.

Fulton County.—No replies.

Lehigh County.—No replies.

Mifflin County.—Four replies. No. 1. Milroy; population, 750; elevation, 600 feet. Town is exposed and cool; is liable to sudden changes in temperature. The air is cool and damp. Fogs seldom occur. Agriculture and mining, factories and lumbering, are the pursuits. Germans and Irish form the population. Consumption is very rare. No part of town is liable particularly. Phthisis runs an acute course; "but few cases have occurred in many years." No cases of the disease have been cured or made worse by coming to this town. Milroy is located at the foot of the Seven Mountains, on the south side of the mountains and east end of Kishicoquillas Valley. The ground or soil on which it is built is all of made earth or wash from the mountains, to a depth of an average of twenty feet—the greatest depth is about forty feet—and of mountain soil, sand and pebbles, with large bowlders. There are caverns. There is a mountain stream of considerable size flowing rapidly through the town, and sinking under a limestone ridge near the center of the town, making its appearance again in a much larger stream two miles south of Milroy. I have been informed that one entire family, except one member, a female about forty years of age, died of consumption. The family consisted of father, mother, four daughters, and one son. Another family consisted of father, mother, four daughters, and three sons. Three of the daughters died of consumption. There was, in my opinion, nothing to indicate hereditary disease in either case. "I have not seen any cases of hereditary influence in twenty years, or since my sojourn here."

In a practice of over forty years has seen cases prevented by proper diet and regimen, cod-liver oil, iron, etc. No proof of infection. No malaria, pneumonia, rheumatism, or Bright's disease.

No. 2. Lewistown; population, 4,000; elevation, 800 feet. Not exposed. Disease is not prevalent. There are often rapid changes from heat to cold. Soil alluvial; limestone. Has had but six cases in large practice in a year. Negroes are most often affected. Phthisis is not prevalent, and no part of the town or houses peculiarly liable to its prevalence. It runs a chronic course generally, and is promoted by heredity. The reporter has never seen any case benefited by going from or coming here, but believes that the disease can be prevented in childhood by hygienic measures. No evidence that it is contagious. Malaria is slightly prevalent in autumn.

Twenty-six, 27, and 28, negative answers.

No. 3. Newton Hamilton. Town sheltered and cold. South and west winds prevail. Air is cool and damp and foggy. Much shade. Town liable to sudden changes of temperature. Occupation, farming. Phthisis prevalent. No part of town is liable. He knows of a house peculiarly liable, where there is hereditary influence. No race particularly liable. Phthisis almost always promoted by heredity. No evidence as to infection. Malaria is very prevalent. Twenty-six, 27, and 28, negatively answered.

No. 4. McVeytown; population, 700; elevation, 522 feet. Exposed. On the Juniata River. Soil alluvial; clay. Not liable to sudden changes of temperature except in summer. Fogs from August to November. Population, Americans and a few negroes. Consumption is rare. No part of town or any house is liable. Phthisis is somewhat prevalent among negroes. Runs chronic course. All cases are inherited. Can be prevented by hygienic measures. No evidence in support of contagion. Malaria is prevalent. No relation to phthisis. Rheumatism, both acute and chronic, is prevalent. Pneumonia and Bright's disease not prevalent.

Philadelphia: One reply from Conshohocken; population, 5,000; elevation, 210 feet. Town is exposed and cold; fogs sometimes occur. There is not too much shade. The town is not subject to sudden changes. People work in factories. All nationalities represented. Phthisis not prevalent. Occurs most frequently among Irish. The disease is unquestionably promoted by heredity. The reporter, Dr. Styles, has known the disease to occur in wives who have nursed sick husbands, no heredity or family history accounting for the disease, which proved fatal in wives after the death of husbands.

Malaria is prevalent, but bears no relation to phthisis. Rheumatism, pneumonia, and Bright's disease are all prevalent.

Washington County.—One reply. Monongahela City; population, 3,000; elevation, 749 feet. Sheltered. East and west winds prevail. In winter and spring there is much damp weather, with heavy fogs in winter and late autumn. There are sudden and extreme changes of temperature; in summer the mercury often reaches 98°, and in winter —18° F. There is a medium amount of rain and snow. There is shade in the streets; trees should be cut down. Soil alluvial and good. East winds troublesome to consumptives. The people are engaged in farming, factories, and mining; they are of American descent, mining population, mixed. Phthisis is said to be "not prevalent to any great extent, and yet we have quite a number of cases, chiefly hereditary." No part of the town and no house and no race are associated particularly with phthisis. This disease runs a chronic course. The reporter, Dr. C. B. Wood, says: "Some cases have been benefited by going to the Pacific coast; others to Texas; others to the Northwest. None benefited by coming here; on the contrary, I think it an injury to them." In ten years Dr. Wood has met with but one acquired case, and he believes that incipient phthisis can be cured or prevented by out-door life, keeping away from school, proper diet, ventilation, and medicine. Dr. Wood is a firm believer in the contagious nature of consumption, and offers four cases in proof. Malaria and Bright's disease are not prevalent; rheumatism and pneumonia are.

N. B.—The returns as given in the census from this county are so much at variance with those from neighboring counties that there is almost certain and flagrant inaccuracy. The report gives 92 deaths from consumption among females and only 40 among males.

Adams County.—No. 1. Dr. Pearson writes: "York Sulphur Springs is situated in the northern part of Adams County, at the foot of a mountain-range, in what may be called a rolling country. It is about 800 feet above sea-level, with a population of about four hundred, and is protected on the north and west by the foot-hills of South Mountain. I have practiced here since 1850. My practice takes in a scope of ten or fifteen miles in Adams, York, and Cumberland Counties, and includes both mountain and valley. Forty years ago the country was heavily timbered. Since then much of the timber has been cleared away, land and buildings improved, and inhabitants live much more comfortably than years ago. And, as a result of these improvements, *diseases of all kinds have diminished.* Although not more subject to consumption than other localities, I have found it to prevail alike in mountain and valley. Our population is mainly native-born, descendants of German and Scotch-Irish, so that I have had no opportunity of observing the disease in different race or nationality, but do not think there would be any material difference.

"I can hardly say that consumption is a prevalent disease. Yet it is seldom that there are no cases in the country. I have not found it to prevail in any particular house or any particular locality, but affecting the poor and affluent alike in mountain and vale. The great majority of cases are undoubtedly hereditary. I have known whole families carried off by it.

"Hereditary cases are generally considered chronic, and run their course very slowly, while cases not hereditary are acute, and are called by country people 'galloping consumption.' One prolific cause of the disease when not hereditary is neglected amenorrhœa among young females.

"I have met with no case of prevention of the disease when hereditary; it may be baffled, and life and health prolonged, but will almost invariably make its appearance at some time, and such cases are generally rapid in their course.

"I have found the most satisfactory results as a prevention in the young from the use of the hypophosphites, with cod-liver oil, malt, and like remedies.

"I have not met with any reliable evidence of the disease being contagious or infectious. Cases have occurred where, the husband or wife having died of consumption, the survivor soon followed from the same cause. But in these cases there was as much probability of a hereditary tendency as of contagion.

"I have not found malaria to have much influence on the disease, but, our country not being a malarial one, I have not had much opportunity to determine.

"I have known of no cases that were benefited by coming into or leaving this locality.

"Rheumatism is not very prevalent, but prevails to some extent in damp or very changeable seasons.

"Pneumonia prevails to some extent during winter and spring, is mostly caused by exposure and sudden changes of temperature from damp to cold, and *is a fruitful cause of acute consumption.* Bright's disease is becoming quite prevalent."

No. 2. Two reports from Gettysburg; population, 3,100; elevation, 545 feet. On a knoll between two ridges. Rather sheltered but dry, with a moderate amount of shade in town. Few fogs. Soil red shale; good. South and northeast winds troublesome to consumptives. Phthisis is *rare*, and no part of the town suffers more than another. No houses in particular suffer. Phthisis is catarrhal and acute. A very small percentage of cases is due to heredity. It can be warded off by plenty of good food, etc. No evidence in support of infection. No malaria. Pneumonia and rheumatism moderately frequent. Bright's disease very rare.

Dr. J. W. C. O'Neal does not seem to think consumption at all rare. He speaks of one house, the cellar of which was in bad condition, where there were many cases of phthisis. There was heredity, and the habits of the people were sedentary.

The disease is most prevalent among Americans, and runs a chronic course. Is hereditary, and arises frequently from pneumonia. Children can be saved by hygienic measures. It is not contagious. No malaria; 26, 27, and 28 negative.

No. 4. Bonneauville; population, 118. The disease is rare. In spring and fall, town is cold and damp, with rapid and great changes in temperature. Farming. American descent for several generations. Where the disease has been in any particular house or part of town it has been due to heredity. It is most prevalent among those of German descent. It runs a chronic course. All reporter's cases have hereditary taint. Much can be done for such children by guarding them carefully. Reporter has evidence of infection. Malaria is not prevalent. Rheumatism is common in spring and autumn. Pneumonia common. Bright's disease is not prevalent.

No. 5. McKnightstown; population, 160; elevation, 600 feet. Is exposed and cold, with infrequent fogs and west winds prevalent. The disease is prevalent, but no part of the town suffers more than another. Dr. Elderdice speaks of a house where the conditions are good, where there is hereditary influence, and where phthisis has been frequent. It is not particularly prevalent in any race. It runs an acute course. About sixty per cent. of cases are due to heredity. Prevention is possible in children. Dr. Elderdice considers it contagious in many cases. Malaria is prevalent, and consumption is also in malarial districts. Rheumatism and pneumonia are prevalent. Bright's disease is not.

No. 6. Littlestown; population, 1,000; elevation, 700 feet. Is exposed, with occasional fogs. Farming is the general employment, all citizens being of American descent. Consumption is rare. No portion of town or any house seems to be particularly associated with phthisis. It runs an acute course, and is promoted by heredity. Dr. Seiss does not believe it can be prevented in children predisposed. He has evidence in support of infection. No prevalence of malaria, rheumatism, pneumonia, or Bright's disease.

Alleghany County.—See Pittsburgh.

Armstrong County.—Two replies. No. 1. Kittanning; population, 1,800; elevation, 809 fee Sheltered. Fogs seldom occur. Medium amount of snow. Not too much shade. Soil good. East winds troublesome to consumptives. No great atmospheric changes. Citizens engaged in mills, etc. Moderate amount of consumption. There are some cases of heredity. The disease is usually chronic and hereditary. The reporter, Dr. Alter, says that in one instance a perfectly healthy wife nursed a husband for six months; after his death she had a cough and slight hæmorrhage, but recovered. Another wife died within a year after her husband had died from phthisis. No hereditary tendency in either case. No prevalence of malaria, rheumatism, pneumonia, or Bright's disease.

No. 2. Worthington; population, 150; elevation, 1,100 feet. Sheltered, but cold. No excess of shade. Great changes in temperature. The occupations are farming, factories, and mining. American descent, with Germans and Irish. The disease is rare. No part of town or any house peculiarly liable. No nationality in particular suffers. The disease runs a chronic course. All cases are hereditary. Children may escape through care. No prevalence of malaria, rheumatism, or Bright's disease. Pneumonia is prevalent.

Dr. John K. Maxwell says: "I have for forty years believed that I have seen evidence of the contagiousness of this disease. The wife of a consumptive husband, or the husband of a consumptive wife, almost invariably dies of consumption, although belonging to healthy families themselves. I am unable to say whether this is owing to contagion or infection, but in a long experience I can recall but two exceptions to the rule, in both of which apoplexy was the cause of death."

BEAVER COUNTY.—One reply. Beaver Falls; population, 8,000; elevation, 600 feet. The town is sheltered by high, wooded hills. West winds prevail. The air is damp and fogs prevail. Soil gravel. Southeast winds troublesome to consumptives. There are marked changes of temperature. Population mixed; engaged in factories. Grinders and polishers are prone to phthisis. The disease is chronic and hereditary. Persons have been cured by going away to a warm, dry climate. There is some malaria. Rheumatism is rather prevalent. Pneumonia prevails during some winter seasons more than others. Bright's disease is not especially prevalent.

BEDFORD COUNTY.—One reply. Bedford; population, 3,000; elevation, 1,200 feet. Sheltered, but cold. Fogs occur. Much shade. No trees cut for health. Liable to sudden changes—heat and cold. Lumbering, farming, and manufacturing are the occupations. All nationalities represented. Consumption is prevalent. No spot in town particularly liable. There are houses particularly liable. No occupation exempt from disease. Most common among Americans and negroes. Seventy-five per cent. are due to heredity. Runs both acute and chronic course, generally the latter. Children can be saved by strict regularity in food and clothing. No malaria. Rheumatism and pneumonia common, and prevalence of Bright's disease.

BRADFORD COUNTY.—Three replies. No. 1. Terrytown; population, 2,000; elevation, 600 feet. The air is cool at night; warm by day. Damp by reason of frequent fogs along the Susquehanna. Westerly winds prevail. Southeast winds are troublesome to consumptives. Soil good. Sudden changes of temperature are quite common. Farming and mining are the occupations. Inhabitants largely New Englanders. Consumption is rather rare; it is more common along the river, where malaria prevails; phthisis is chronic, lasting from two to twenty years, and affects all classes alike. In a practice of over fifty-five years Dr. George F. Norton finds that over fifty per cent. of cases are constitutional and hereditary. He does not believe that hereditarily predisposed children can be rescued from phthisis, but its advent may be postponed. He believes in contagion. Malaria is very prevalent along the river. Neither rheumatism nor pneumonia is prevalent, and Bright's disease has not been met with.

No. 2. Athens; population, 3,000; elevation, 750 feet. Sheltered by hills. Warm in summer, cold in winter. Damp, with dense fogs. Considerable shade in town; too much in places. Soil rich. South winds bad for consumptives. Occupations farming, mining, etc. Consumption is rather rare. One house, where heredity was present, was associated with phthisis. More frequent among Irish than Americans; more frequent still among negroes. Some cases are acute, others chronic; most cases are acute. It is due to heredity in seventy-five per cent. of cases. It can be prevented by hygienic measures. Has evidence in support of infection. Malaria common. Rheumatism is frequent, also pneumonia. Bright's disease rare.

Dr. E. P. Allen, who has practiced over forty years, writes:

"I have seen a few cases where the husband died of consumption and the wife's death followed in a few years, from three to five, and could trace no hereditary influence to attribute the disease.

"I have known a father, two daughters, wife, three sons, comprising every member of family, to die of consumption, though from the death of the father to the death of last member of family was thirty-eight years. Another family, consisting of five sons and two daughters, all of whom died in a period of twenty-three years. The father did not die of consumption, but from an injury on head, several years prior to death of first child. The mother is still living and healthy. Heredity on side of father. A number of other cases might be reported quite as strong. No unsanitary conditions about houses or premises could be detected, such as shade from trees or dampness. Both families lived on farms on dry and elevated land.

"Malaria made its appearance about eight years since, after an absence of fifty or sixty years, when it is said to have been quite prevalent. It has been declining the past three years, and is now rarely seen, though the word malaria is often improperly applied to sickness. Consumption is not very prevalent in the malarial district.

"Rheumatism is rather a frequent disease.

"Pneumonia may prevail at all seasons of the year among us, but it is far more frequent and fatal during the months of March and April than at any other period of the year. Its victims are mostly active business men past forty years of age.

"Bright's disease occurs now and then, but it is not a frequent disease."

No. 3. Troy; population, 1,500; elevation, 1,148 feet. Sheltered by mountains. North, south, and west winds prevail; east winds rare. Fogs rare. Soil good; subsoil, clay. Few marshes. The population is American, German, and Irish, and is engaged chiefly in farming and lumbering.

Consumption rare and chronic; cases of phthisis cured by removal to this county. Phthisis always hereditary. No malaria. Rheumatism, pneumonia, and Bright's disease prevalent.

Dr. Dare writes that Bradford County is damper than Sullivan, Tioga, and Potter Counties, owing to retention of water in clay subsoil. Fogs prevail along the valleys, and especially the Susquehanna. Dr. Dare speaks of a family of Smithfield, near Troy, of which all the children have died of consumption. The house is on an elevated ridge, "but damp in consequence of the clay subsoil."

Dr. Dare's own case is an instance of the benefit of removal to Bradford County. He resided in Chester, Delaware County, in 1857, was then thirty-five years of age, and had pulmonary hæmorrhage, being the only survivor of six children, all but one having died of consumption between the twentieth and thirty-fifth year. The family lived in Cumberland County, N. J. "After being prostrated one year I came to Troy, Bradford

County, Pa. Since then I have had but one hæmorrhage, which occurred the following summer, and since that time I have been perfectly well." "The other members of my family were all attacked with pulmonary hæmorrhage as I was, and died in about one year after. I can see no reason, if I had remained in that section of the country, why I would have fared any differently."

Butler County.—No reply.

Cambria County.—Two replies from Johnstown; population, 2,500; elevation, 1,200 feet. The town is sheltered and comparatively warm. Northwest winds prevail. The air is cool and damp, and there are sudden changes of temperature. There are high hills. Soil is of medium quality. Consumption is said to run a chronic course, and, in a majority of cases, is hereditary. No prevalence of malaria, but rheumatism, pneumonia, and Bright's disease prevail.

No. 2 says there are fogs in the autumn. There is much shade, and there are sudden changes from heat to cold. Mills and mines occupy citizens, who are German, Irish, English, and Pennsylvania Dutch. Phthisis is *rare*. No part of town liable, nor any house. It runs an acute course. Not entirely due to heredity. No evidence in support of infection. No malaria. No prevalence of rheumatism, pneumonia, or Bright's disease.

Carbon County.—One reply. Weatherly; population, 3,000; elevation, 1,200 to 1,500 feet. The town is sheltered and cold. East and west winds prevail. Air cool. Fogs occasional. There is a great deal of snow. Not much shade. Hills and valleys. Sudden changes of temperature. People of American descent, Irish, and Germans, engaged in manufacturing. Consumption rare. No part of the town and no race liable to the prevalence of consumption. Disease chronic and hereditary. Malaria not prevalent. Rhematism and pneumonia are prevalent, and there are some cases of Bright's disease.

Centre County.—Three replies. Two (Phillipsburg and Zion) state that phthisis is rare; one (Bellefonte) that it is moderately rare, not prevalent. The latter town has a population of 3,200; it is said to be in a sheltered but cold situation, liable to sudden changes of temperature and occasional fogs. Elevation, 733 feet. No particular parts of the town or individual houses are especially associated with phthisis. The course of phthisis is chronic, and the disease is hereditary excepting in the cases of axe-grinders. Rheumatism is moderately prevalent. Malaria, pneumonia, and Bright's disease rare.

No. 2. Phillipsburg, 28 miles west of Bellefonte, has a population of 5,000, and an elevation of 1,450–1,500 feet. It is in a valley sheltered by hills, and is warmer than the surrounding country; dry; free from fogs. Phthisis always takes a chronic course. Malaria was traced in three instances to a local, temporary cause—the plowing of swampy ground. Many cases of malaria were cured by residence in this county.

Rheumatism, pneumonia, and Bright's disease uncommon.

No. 3. Zion; population, 100; elevation, 883 feet. Exposed and cold; northwest winds prevail; fogs are rare; changes of temperature are marked. Phthisis is hereditary in 75 per cent., chronic, and frequent in axe-grinders. Rheumatism and pneumonia are prevalent; Bright's disease rare.

Farming, mining, and lumbering are carried on in this county.

Columbia County.—One reply. Catawissa; population, 2,400; elevation, 477 feet; sheltered; northwest winds prevail. The air is damp and cold and there are fogs; rain-fall and melted snow, 39 inches; snow, 50 inches. There is a great deal of shade, and trees have been cut down for health. Soil very rich. East winds troublesome to consumptives. Marked atmospheric changes. People engaged on farms and railroads—Americans, Germans, and Irish. Consumption is rare and chronic; hereditary in 75 per cent. of cases. Malaria is prevalent, but phthisis is not prevalent in malarial districts. Rheumatism prevails; pneumonia and Bright's disease do not prevail.

Crawford County.—Two replies from Titusville. Population, 8,000; elevation, 1,194 feet. Town sheltered and is warmer than the hills about it. Both reports state that the atmosphere is damp, that sudden changes of temperature occur, and that there are some fogs. One report states that east and north winds are the more troublesome to consumptive patients, and that the disease is more frequently acute, with no evidence of infection; the other report states that southwest winds are the more troublesome, and that the disease is usually chronic and that there is presumptive evidence to prove infection, all of which goes to show that doctors will occasionally disagree. Consumption is not infrequent; rheumatism is prevalent; pneumonia and Bright's disease occasional. Trees have been cut down in the streets. All occupations exist and all nationalities are represented. The Swedes are prone to die of phthisis; the Jews rarely.

Cumberland County.—Two replies. Both agree as to the prevalence of consumption and its chronic course, that easterly winds are the more troublesome in this disease, and that the large majority of cases are hereditary. Rheumatism is prevalent.

No. 1. Shippensburg; population, 3,000; elevation, 660 feet. Some shade-trees have been cut down; the atmosphere is damp and fogs occur. Great changes of temperature occur, and there is a marked difference between the temperature at noon and night. The industries are diversified. The people are chiefly of American descent; negroes are numerous. Pneumonia is prevalent and Bright's disease prevails to some extent.

No. 2. Newville; population, 1,900; elevation, 526 feet. The town is exposed and cold, but dry and free from fogs. The underlying rock is limestone and slate, and farming is the chief occupation. The people are largely of Scotch-Irish descent. Negroes and Indians (Carlisle), having once contracted phthisis, rapidly succumb.

For further information see letters of Dr. John J. Koser, Dr. W. G. Stewart, and the Rev. J. B. Scouller.

Dauphin County.—No reply.

Delaware County.—Two replies. No. 1. Media. Consumption rather prevalent. Soil red; a clayey loam. All nationalities represented. Occupation farming. Elevation low. Fogs occasional. Malaria and rheumatism rare. Pneumonia frequent in winter. Bright's disease infrequent.

No. 2. Clifton Heights; elevation, 154 feet. Sheltered. Drained by Darby Creek and Ridley Creek. Country undulating. Soil good. Manufactories. Phthisis somewhat prevalent. In one house one sister and four brothers died of consumption. They all passed the age of thirty-five years. Course slow. Hereditary history. Roomy frame house, dry, on elevated ground; grove on the south. Irish children predisposed, from being put at work in factories at an early age. Here the course of the disease is quite rapid. Hereditary in 90 per cent. Reporter thinks the disease may be prevented to some extent. Malaria near brick-yard. No prevalence of rheumatism, pneumonia, or Bright's disease.

Q. No. 24. A man and wife lived together for twenty-five or thirty years and reared a large family of children. At the age of forty-eight years the wife had her first attack of hæmorrhage of the lungs and developed well-marked consumption. At that time the husband was a stout, ruddy-faced Irishman, apparently in perfect health. In the course of a year he became consumptive and died before the wife. One son has since died of the same disease.

No. 3. Upland; population, 2,500; near the Delaware River. Fogs are frequent. There is a good deal of shade. Many cellars have water a large part of the year. Soil clayey. East and northeast winds troublesome in consumption. Consumption not very prevalent; occasionally hereditary and generally chronic. Cases have been cured by removal to Georgia pinelands and to Maryland. Malaria is more or less prevalent, but bears no relation to phthisis. Rheumatism, neuralgia, bronchitis, and pleurisy are common.

FAYETTE COUNTY.—Five replies. All report phthisis prevalent. In no place is there a report of excessive shade. The population is mixed and engaged in farming, coal-mining, and manufactures.

No. 1. Uniontown; population, 5,000; elevation, 950 feet. Exposed; cold. Southeast and northwest winds prevail. There is not much fog; the air is cool and damp. Limestone. Soil good. Northwest winds troublesome to consumptives. Considerable changes of temperature. Phthisis chronic. Americans and negroes affected. Hereditary. Rheumatism and pneumonia prevalent, Bright's disease not; no malaria.

No. 2. Brownsville; population, 4,200; elevation, 774 feet. Sheltered. West winds prevail. Fogs rise from Monongahela. River in spring and autumn. Average rain-fall, nine years, 36·07 inches. Limestone; clayey loam. No ponds or marshes. Good drainage. Rich soil. East winds troublesome to consumptives. Reporter says phthisis is "more rare among negroes than any other class." Phthisis both acute and chronic. Two cases have apparently been cured by going to California and one to Colorado. Reporter believes in infection. Malaria and pneumonia not prevalent. Rheumatism and Bright's disease are prevalent.

No. 3. New Haven; population, 1,000; elevation, 920 feet. Sheltered and warm. Westerly winds prevail. Fogs occur in the spring and autumn. At other times the air is dry. Southeasterly winds most troublesome to consumptives. Great atmospheric changes. Americans and negroes suffer. Disease chronic and acute. Cases have been cured by removal to our mountains or going West. Hereditary in 60 per cent. No malaria. Catarrhal pneumonia prevalent; croupous rare. Bright's disease rare; rheumatism prevalent.

No. 4. Vanderbilt; population, 1,000; elevation, 1,200 feet. Sheltered and warm; in a valley. Soil good. Northeast winds troublesome to consumptives. Phthisis chronic. Malaria, rheumatism, and Bright's disease not prevalent. Catarrhal pneumonia prevalent.

No. 5. Dunbar; elevation, 995 feet; sheltered north and west. Cool, dry; no fogs. South winds troublesome to consumptives. Marked changes of temperature. One house particularly associated with phthisis; it is damp and shady. Americans chiefly affected. The disease is usually acute. Reporter has evidence in favor of infection. Malaria, pneumonia, and Bright's disease not prevalent. Rheumatism prevails.

HUNTINGDON COUNTY.—One reply. Orbisonia; population, 1,100; elevation, 750 feet. Consumption occasional. The town is exposed and cold. West and southwest winds prevail; the former are the more troublesome to consumptive patients. The air is cool and damp, and fogs and sudden changes of temperature occur. There are some ponds. The soil is of medium quality; farming and mining are the chief pursuits. The people are for the most part Americans. Phthisis runs an acute course, and about half of the number of cases are said to be hereditary. No malaria or Bright's disease. Rheumatism is prevalent. Pneumonia moderately so.

JEFFERSON COUNTY.—No reply.

JUNIATA COUNTY.—No reply.

LACKAWANNA COUNTY.—Two replies from Scranton. Population, 70,000; elevation, about 750 feet. Mortality from phthisis 7·33 per cent. of total mortality. No fogs. Sudden changes of temperature. All nationalities represented; engaged chiefly in factories and mining. One reporter thinks phthisis is usually chronic and believed to be acquired, though hereditation has been noticed by the second, and his cases are acute. One reporter instances a case where a healthy wife was infected by a diseased husband. No malaria. Rheumatism, pneumonia, and Bright's disease are prevalent.

(*To be concluded.*)

FUNDAMENTAL GYNÆCOLOGICAL PATHOLOGY.*

By H. W. STREETER, M. D.,
ROCHESTER, N. Y.

IN answer to a criticism on a previous paper presented to this society by the writer—to wit, that the pathology of gynæcological cases differs so widely that no general plan of treatment can be prescribed applicable to all cases—I would call your attention to the following considerations which go to show that there is a common pathological condition associated with nearly all diseases of the female sexual organs. Comparatively little importance has been attached to it in most of the text-books; it is overshadowed by more visible and tangible evidence of disease, is often overlooked and not recognized at all, is remediable to a great extent, and, unless remedied, defies all treatment. It is often remedied without being recognized by means employed empirically or with an entirely different object in view. Whatever the means, if they do not subserve this end, they can not be effective. Want of the recognition of this condition is the principal and prevailing cause of failure in gynæcological treatment, as its thorough appreciation is the secret of success.

Anatomy teaches us that the pelvis is filled with spongy elastic cellular tissue, through which blood-vessels ramify and interlace in a network unequaled in complexity and capacity in any other part of the body of equal extent. Within and upon this cushion rest the rectum, vagina, ovaries, and uterus.

Physiology and daily observation teach that the vascular supply of no part can be interrupted without the function of the part being impaired; and, *vice versa*, that the function can not be impaired without the circulation being disturbed. Pathological anatomy shows that in gynæcological cases of nearly all varieties the pelvic circulation is interrupted to a greater or less extent, the vessels often being tortuous, varicose, and inelastic, and the cellular cushion soggy instead of spongy—a condition corroborative of the conclusion to which a consideration of normal pelvic anatomy and physiology and gynæcological ætiology naturally leads.

Let us look for a moment at a few of the most common diseases met with in daily practice.

Leucorrhœa is caused by external irritants, such as gonorrhœa or caustic, or by internal causes, such as uterine displacements, corporeal or cervical endometritis, or other acute or subacute inflammation of the uterus, ovaries, or rectum, or an impoverished condition of the blood. Whether it is caused by the irritation of a uterine or gonorrhœal discharge, by the pressure of a displaced uterus, or an extra-vaginal tumor, fibroid, ovarian or rectal, it is inconceivable that the mucous membrane alone is affected, and the submucous and adjoining connective tissue in a normal condition. The rationale of the exciting causes and the prompt effect of removing the same, the effects of hot water or other astringents, rest, hygiene, tonics, all go to show that whatever the exciting cause, every case of leucorrhœa is accompanied by congestion, active or passive, of greater or less degree, of the pelvic tissue.

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* Read before the Medical Association of Central New York, May 18, 1886.

In gonorrhœa it extends from the vagina inwardly into the connective tissue; in an ovarian tumor or a uterine displacement, pelvic congestion is caused by pressure, and the leucorrhœa is an effort of nature to relieve the obstructed circulation; in anæmia or chlorosis the pelvic in common with the general circulation is sluggish, and the over-dilated and inelastic vessels seek relief in the vaginal discharge.

Inflammation of the mucous membrane covering the os uteri, lining the neck or body of the organ, must always extend more or less into the submucous tissues. Any other supposition would be a virtual denial of the well-established doctrine of the extension of inflammation by continuity and contiguity of structure, and would involve necessarily the establishment of a mathematically precise boundary-line (as illustrated in a popular text-book), beyond which so-called endometritis can not extend. As long as the parts are constructed and their functions regulated as they are, the establishment of any such proposition is an anatomico-physiological impossibility. I said the endometritis extended into the underlying tissues. I should rather say the condition of the underlying tissues caused a congestion of the mucous membrane lining the body and cervix or covering the os. Such is the order except where the inflammation is provoked by direct mechanical or chemical irritation of the mucous membrane. The condition is essentially the same whether it proceeds from or toward the membrane. This reasoning applies to all varieties of inflammation, acute or chronic, follicular or ulcerative, affecting any portion of the mucous membrane from the vulva to the fimbriated extremities of the Fallopian tubes.

Laceration of the cervix assumes pathological importance just in proportion as it is the exciting cause of congestion of the uterus and surrounding tissues.

The mere fact of the os being divided is of no importance *per se*, for we know that such is the common condition in multiparæ, and often causes no disturbance. Why? Because it does not interfere with the utero-pelvic circulation.

On the other hand, congestion and hyperplasia, with all their accompanying symptoms, will often rapidly subside after uniting the lips of a divided os uteri. In many cases the symptoms will be greatly ameliorated by reducing the congestion, even if the laceration is not united. If the operation succeeds, it is because it accomplishes this purpose; and if it fails, it is because it does not accomplish this purpose, or because the symptoms depend upon a congestion of the pelvic organs or tissues independent of the laceration, or the importance of which was perhaps overlooked in the preparatory treatment, or upon other causes.

Uterine displacements are caused by labor, miscarriage, pressure from corsets, fæces, or a tumor, change of the center of gravity by high-heeled shoes, excessive walking and standing, occasionally a sudden fall, excessive coitus, cold injections, imprudent exposure or excess during menstruation—all causes tending inevitably to congestion. The symptoms are relieved by measures tending to relieve congestion, such as rest, heat, counter-irritants, local sedatives and derivatives, in conjunction with a judicious and careful correction of the malposition.

It is not to be supposed that this congestion centers its whole force upon the uterus alone, without involving the surrounding tissues, nor if it did that these tissues would not speedily become involved by pressure of the displaced organ, by continuity and contiguity of structure. The uterus is not like a wheel in a machine, which causes the machine to stop merely by the mechanical effect of being bent, broken, or thrown out of place. The physical, chemical, anatomical, and physiological peculiarities of the animal organism forbid our looking upon it merely as a mechanical contrivance.

The *normal* position and inclination of the uterus vary in different individuals, and the definition of what is its normal position allows of considerable latitude of anatomical limits. If there were an absolutely fixed standard of position, then any variation from that position should *always* cause morbid symptoms (just as much as a dislocated shoulder-joint), which we know is not the case.

While it certainly is desirable to restore a displaced uterus to its normal position, yet such replacement alone often does not relieve the symptoms, and, when effected by a hasty or undue exercise of force or pressure by finger, tampon, sound, or pessary, frequently aggravates existing symptoms or kindles up a new train. On the other hand, these same cases may be often quickly and for a long time relieved, when the means employed for reposition are accompanied by measures for relieving the congestion of the organ and adjacent tissues.

It is not my intention to more than merely mention another morbid condition common to all forms of pelvic congestion, namely, the impairment of the nervous and digestive functions. In conclusion, listen to the words of the great gynæcological master who has been for a quarter of a century at the head of the Woman's Hospital of the State of New York, Thomas Addis Emmet.

"We shall have made a great advance in solving the problem as to the true pathology of many supposed uterine diseases when we seek for the cause outside of the uterine limits. For many years I have been convinced of the truth that we have been misled by confounding cause and effect. Inflammation of the neighboring connective tissue of the pelvic veins and lymphatics, and the mechanical effects exerted by new growths not directly connected with the uterus, have indirectly brought about changes in the uterus which we have treated as the primary disease. We have only recognized an effect, as expressed by increased or lessened secretion, by the seeming formation of new tissue or a diminution of the old. I use the term cellulitis as expressing the most common condition of pelvic inflammation in connection with the non-puerperal diseases of women.

"I do not exaggerate when I assert that pelvic cellulitis is by far the most important disease with which woman is afflicted. It is the most common and becomes the most important in being but seldom recognized when limited in extent. I do not hesitate to make the assertion, based on my own knowledge, that many practitioners habitually neglect to recognize this condition when circumscribed, or they do not appreciate its importance if by accident it is detected. Its undetected presence may to the end thwart all treatment. A great advance will be made in the treatment of the diseases of women whenever practitioners become so impressed with the significance of cellulitis as to apprehend its existence in every case. Very great advances have of late years been made in uterine pathology and therapeutics, but an intimate study of the pelvic cellular tissue, in its normal and morbid states, will bring to us a solution of many problems which still perplex us. Any departure from the normal in this tissue must of necessity affect the uterus and its appendages, for their blood-, nerve-, and lymph-supply is received through it, and must be influenced by any disturbance in it. Although I may not be able to recognize that every form of uterine trouble is preceded or accompanied by changes in the cellular tissue, yet I believe that future observation will show that those forms in which they are absent are relatively few. My convictions are that, while the primary cause of uterine disease lies, through the influence of the sympathetic system, in impaired nutrition, we must look to pathological changes in the connective tissue as the immediate cause of the results we now regard as the original disease in the uterus and ovaries."

DRUGS AND DIGESTION.*

By ROBERT G. ECCLES, M. D.

(*Concluded from page 602.*)

In testing the essential oils found in the next table, fifteen centigrammes were first dissolved in two grammes of alcohol and then added to the digesting fluid. Besides the usual control containing no drug, an extra one was added containing the same amount of alcohol as was used to dissolve the oil. This came out in two hours and ten minutes. The delay time of two grammes of alcohol was therefore ten minutes.

Essential Oils.

1. Cinnamon	= over 10 hrs.	15. Spearmint	= 3 h. 15 m.
2. Pimento	= “ “ “	16. Pennyroyal	= 3 h. 15 m.
3. Lemon-grass	= “ “ “	17. Aniseed	= 3 h. 15 m.
4. Bitter-almond	= “ “ “	18. Fennel	= 3 h. 15 m.
5. Clove	= 9 h. 50 m.	19. Lavender	= 3 h. 10 m.
6. Bay	= 8 h. 40 m.	20. Peppermint	= 3 h. 10 m.
7. Bergamot	= 8 h. 40 m.	21. Thyme	= 3 h. 10 m.
8. Sassafras	= 8 h. 20 m.	22. Wormwood	= 3 h. 10 m.
9. Wintergreen	= 5 h. 10 m	23. Erigeron	= 3 h. 10 m.
10. Rose	= 4 h. 50 m.	24. Cajeput	= 3 h. 10 m.
11. Origanum	= 4 h. 20 m	25. Rosemary	= 3 h. 10 m.
12. Citronella	= 3 h. 30 m.	26. Nutmeg	= 3 h.
13. Caraway	= 3 h. 20 m.	27. Rose-geranium	= 3 h.
14. Coriander	= 3 h. 20 m.	28. Orange	= 3 h.
29. Lemon	= 2 h. 55 m.	36. Cedar	= 2 h. 40 m.
30. Wine (ethereal)	= 2 h. 50 m.	37. Patchouli	= 2 h. 40 m.
31. Amber	= 2 h. 50 m.	38. Croton	= 2 h. 20 m.
32. Neroli (petale)	= 2 h. 50 m.	39. Sandal-wood	= 2 h. 10 m.
33. Black-pepper	= 2 h. 50 m.	40. Cubeb	= 2 h. 10 m.
34. Juniper	= 2 h. 40 m.	41. Turpentine	= 2 h. 10 m.
35. Savin	= 2 h. 40 m.		

The first four were again tried with one third the amount of essential oil. Bitter almond then came out in three hours, and the others in five hours. A glance over the table shows that essential oils of similar origin, or derived from the same natural orders of plants, produce, as a rule, results very nearly alike. This is exemplified by the labiates spearmint, pennyroyal, lavender, peppermint, and thyme. The close relationship of cedar, savin, and juniper, and also of fennel, coriander, and caraway, tell the same story for the families to which they belong. It is also somewhat singular to find the three oils of sandal-wood, cubeb, and turpentine as closely related here as they are in their physiological indications, although belonging to quite remote orders. Four balsams were, like the essential oils, dissolved in two grammes of alcohol and then added to the digestive fluid with the following results. The Canada balsam dissolved very imperfectly, so that its result is probably short of the true figure:

Balsams.

1. Tolu	= 5 h. 30 m.	3. Canada	= 2 h. 55 m.
2. Peru	= 4 h. 20 m.	4. Copaiba	= 2 h. 40 m.

In a former paper upon peptonization your essayist declared that the tinctures tried up to that time seemed to retard no more than the alcohol they contained. This has since proved to be a grave mistake. Only a few had been tried, and they under the influence of comparatively large quantities of pepsin. Up to that time, too, the method had been to digest a given time and weigh the remaining albumin. This plan was subject to such grave perturbations that it was finally abandoned for the better one of completing the digestion and taking the time consumed as a standard. A large number of tinctures were submitted to this method with the following results. The control time was again two hours. One gramme of each was added to the fifty grammes of fluid:

Tinctures.

1. Chloride of iron	= over 10 h.	19. Asafœtida	= 4 h. 45 m.
2. Iodine co.	= “ “ “	20. Tolu	= 4 h. 45 m.
3. Chloride of iron (tasteless)	= “ “ “	21. Kino	= 4 h. 10 m.
		22. Myrrh	= 4 h.
4. Guaiaci	= “ “ “	23. Catechu	= 3 h. 45 m.
5. Guaiaci ammon.	= “ “ “	24. Colchicum root	= 3 h. 35 m.
6. Lupulin	= “ “ “	25. Digitalis	= 3 h. 35 m.
7. Belladonna	= 9 h. 05 m.	26. Physostigma	= 3 h. 35 m.
8. Warburg's	= 8 h. 50 m.	27. Colocynth co.	= 3 h. 30 m.
9. Cannabis ind.	= 8 h. 50 m.	28. Modif'd Warb'rg	= 3 h. 30 m.
10. Opium	= 8 h. 15 m.	29. Avena sativa	= 3 h. 30 m.
11. Benzoin co.	= 6 h. 45 m.	30. Santal.	= 3 h. 30 m.
12. “ simp.	= 6 h. 10 m.	31. Gentian co.	= 3 h. 30 m.
13. Verat. virid.	= 5 h. 30 m.	32. Sanguinaria	= 3 h. 30 m.
14. Cubeb	= 5 h. 30 m.	33. Cinchona simp.	= 3 h. 30 m.
15. Buchu	= 5 h. 30 m.	34. Nux vomica	= 3 h. 20 m.
16. Aloes and myrrh	= 5 h. 30 m.	35. Cascarilla	= 3 h. 20 m.
17. Valer. of ammon.	= 5 h. 30 m.	36. Senega	= 3 h. 20 m.
18. Hyoscyamus	= 5 h. 20 m.	37. Capsicum	= 3 h. 10 m.

38. Hops = 3 h.
39. Gentian = 3 h.
40. Orange-peel = 3 h.
41. Galls = 3 h.
42. Senna = 3 h.
43. Lobelia æther. = 3 h.
44. Krameria = 3 h.
45. Quassia = 3 h.
46. Valerian = 3 h.
47. Aloes = 3 h.
48. Colchicum seed = 3 h.
49. Cinchona co. = 3 h.
50. Stramonium = 2 h. 55 m.
51. Cardam. simp. = 2 h. 45 m.
52. " co. = 2 h. 45 m.
53. Lobelia = 2 h. 45 m.
54. Squills = 2 h. 45 m.
55. Rhubarb co. = 2 h. 45 m.
56. Cinnamon = 2 h. 45 m.
57. Ginger = 2 h. 40 m.
58. Cantharides = 2 h. 40 m.
59. Lavender = 2 h. 40 m.
60. Ipecac co. = 2 h. 30 m.
61. Poke = 2 h. 30 m.
62. Rhubarb = 2 h. 30 m.
63. Aconite root = 2 h. 30 m.
64. " leaf = 2 h. 30 m.
65. Lemon-peel(fr'sh) = 2 h. 25 m.
66. Opium, camphorated = 2 h. 20 m.
67. Colombo = 2 h. 15 m.
68. Angustura = 2 h. 10 m.
69. Cochineal = 2 h. 10 m.
70. Virg. snakeroot = 2 h. 10 m.
71. Conium = 2 h. 10 m.
72. Arnica = 2 h. 10 m.
73. Dilute alcohol = 2 h. 05 m.

On another trial with half a gramme each of those that failed to complete digestion in the ten hours, the following results were had:

1. Tincture of chloride of iron = over 10 hrs.
2. " iodine co. = 9 h. 35 m.
3. " chlor. iron (tasteless) = 6 h. 50 m.
4. " guaiaci = 6 h. 10 m.
5. " " ammon. = 6 h. 10 m.
6. " lupulin = 5 h. 50 m.

Tincture of the chloride of iron did not show just how thoroughly it retarded until the quantity was cut down to two centigrammes, or one part in two thousand five hundred. Here, then, is the worst tincture in the whole list, and it turns out to be the very one that theory has led physicians to almost universally prescribe with meals. Fortunately, the usual dose is so small that it can do no great amount of harm. But why let it do any? Is it not just as well to administer it between meals and allow our pale, anæmic patients the advantage of strength from their food as well as a richer oxygen-supply in the blood? If we must give a tincture of iron with the meals, then we had better use Creuse's tasteless. Even it retards to an injurious extent, and would be better given between meals. Some of the tinctures that are rarely if ever administered internally have the least retarding effect.

The principal organic bodies used in medicine and surgery, and not related directly to those already given, constitute the next table. With every one of these, fifteen centigrammes was the amount used, and two hours constituted the control time.

ORGANIC SUBSTANCES.

1. Beta naphthol = 4 h. 50 m.
2. Santonin, with 2 grms. alcohol = 4 h. 45 m.
3. Chloroform = 4 h. 40 m.
4. Menthol = 3 h. 40 m.
5. Nitrite of amyl = 3 h. 30 m.
6. Croton chloral = 2 h. 45 m.
7. Chloral hydrate = 2 h. 40 m.
8. Vanillin = 2 h. 40 m.
9. Antipyrine = 2 h. 15 m.
10. Concent. sulph. ether = 2 h. 15 m.
11. Powdered gum arabic = 2 h. 15 m.
12. Sweet spirits of niter = 2 h. 15 m.
13. Acetic ether = 2 h. 15 m.
14. Benzole = 2 h. 15 m.
15. Salicin = 2 h. 05 m.
16. Ethyl alcohol = 2 h.
17. Methyl alcohol = 2 h.
18. Paraldehyde = 2 h.
19. Urea = 2 h.
20. Milk sugar = 2 h.
21. Cane sugar = 2 h.
22. Glycerin = 2 h.
23. Santonin without alcohol = 2 h.

The last eight all came out of the bath with the control experiment, thus showing that there was no retarding effect. No. 23, being insoluble, was corrected by No. 2, where it was put into solution with alcohol. With six of the other seven it took six trials to discover their retarding effect. Urea caused a delay of twenty minutes when raised to thirty centigrammes. Methyl alcohol with three grammes delayed digestion an hour and thirty minutes beyond the control time, paraldehyde with the same amount was ten minutes behind this, and ethyl alcohol half an hour still longer. When eight grammes of white sugar were added to the fifty grammes of digestive fluid, a delay of one hour and five minutes over the usual two hours occurred, and, when the same amount of sugar of milk was put in, it took twenty minutes more than this. It would almost seem from these results that every article used in medicine had some little retarding power that would reveal itself on using it in large enough percentage. White sugar had the least of any of those tried. Milk sugar, so commonly mixed with pepsin to form the saccharated, is of no earthly advantage in it, and is really an injury to its value. The same is true of glycerin, where it is to be put to use at once. Six grammes of glycerin in a fifty-gramme mixture retard half an hour beyond the control time. As an antiseptic to protect the pepsin from bacteria, its utility is unquestionable. Common or ethylic alcohol in half the amount delays twice as long, so that a wine of pepsin is not so scientific as a liquid pepsin, although it is not so bad as some investigators have tried to make us believe. The usual dose of wine of pepsin diluted with the contents of the stomach after a meal will reduce the alcohol to considerably less than one per cent. When in this proportion, its effects are inappreciable, and besides this the alcohol must all rapidly leave the stomach and allow the pepsin to act unaffected. This is probably what occurs where people are in the habit of drinking beer or wine with their meals. After stimulating the peptic glands a little, it rapidly diffuses itself through the system, and, as it has no permanent ill effect upon the digestive ferment, that at once assumes its proper duties. Along with the organic compounds of the last table a trial was made of two compound cathartics and two "after-dinner" pills in separate bottles. They came out together fifteen minutes after the control bottle, showing that their effects upon the digestive fluid are but slight. What their presence in the stomach might do by producing slight nausea and inhibiting the action of the digestive glands is another question that can only be answered by experiments upon patients. Of the fluid extracts but fifteen were tried. All of these except rhubarb came out on the first trial, when one gramme was used. It afterward came out in five hours when reduced to half a gramme. Control time, two hours.

FLUID EXTRACTS.

1. Aconite = 2 h. 20 m.
2. Valerian = 2 h. 30 m.
3. Taraxacum = 2 h. 30 m.
4. Licorice = 2 h. 30 m.
5. Gentian = 2 h. 40 m.
6. Ergot = 2 h. 40 m.
7. Colchicum root = 3 h. 10 m.
8. Digitalis = 3 h. 20 m.
9. Wild cherry = 3 h. 30 m.
10. Buchu = 3 h. 30 m.
11. Cascara sagrada = 3 h. 30 m.
12. Buckthorn = 3 h. 30 m.
13. Guarana = 3 h. 50 m.
14. Hyoscyamus = 3 h. 50 m.

The methods of manufacturing fluid extracts, the materials used, and other considerations with regard to age, storage, etc., have such influence upon them that it was deemed a waste of labor to spend much time upon them. When samples from different makers were compared, the results varied so widely that all further investigation was discontinued for the time being. The Pharmacopœia does not undertake to control their composition beyond telling how they shall be made, and it is doubtful whether its directions are followed even in this. The different amounts of dry extract contained in two samples of the same kind from different makers cause a wide variation in this line of investigation fatal to accuracy. This is true to a less degree of tinctures.

Before proceeding to a consideration of the long list of inorganic compounds it will be well to now pause and study pepsin itself as an organic drug. During this investigation fifty pharmacies were visited and their proprietors or managers questioned regarding the kinds of pepsin dispensed when no particular brand was specified by the physician. The inquiry extended to both pure and saccharated. A universal complaint against the doctors seemed to obtain in almost every place. They said that as a rule medical men did not seem to know themselves what they wanted when ordering, as the vast majority of them never wrote whether they wanted pure or saccharated. Sometimes they judged that saccharated was intended because of the large quantity called for and the evident poverty of the patient. At other times they gave the pure because only a few grains were wanted. Now here was a serious consideration for the poor dyspeptic or the patient suffering from enteric trouble, to say nothing of the child with diphtheria or the man with cystic blood-clot. In any such case had a pure pepsin been dispensed, one grain of which would digest over six hundred grains of albumin in an hour, the effects would vary very considerably from that of another where a home-made saccharated was given, one grain of which would barely digest six grains of albumin in the same time. The one, you will perceive, would be one hundred times as strong as the other. This is no mere fanciful supposition, but actually what probably does occur very often in this and other cities of the United States. To have the same prescriptions dispensed, varying one hundred-fold in two contiguous pharmacies, because of the doubtful way in which we write them, is no light matter. Let such things increase in frequency, and universal skepticism of all medical science must be the outcome. Little things like this tend even now to make pharmacists look upon many physicians with some degree of contempt. When ordering pepsin, be sure and tell whether pure or saccharated is desired, and do not forget that the average price of the former is five or six times that of the latter. Out of the fifty, eleven used saccharated of their own make, five choosing Jensen's to make it from, three Fairchild's, and one each Merck's, Witte's, and Dieck's. Most of them took one part of pepsin to nineteen parts of sugar of milk; but some made it one part to seven. The remaining thirty-nine distributed their patronage upon the following brands as the figures indicate :

1. Hawley's	12
2. McKesson & Robbins's	5
3. Armstrong's	4
4. Schieffelin's	4
5. Schaffer's	4
6. Manlius Smith's	3
7. Lazell, Daly & Co.'s	2
8. Tarrant & Co.'s	2
9. Lehn & Fink's	2
10. Royal	1

The record of choice on the pure pepsins was lost, but Jensen's led all the rest, taking over one third of the patronage. Fairchild's came next. The following were the brands used :

American.

1. Fairchild's Scale.
2. Fairchild's Powdered.
3. Parke, Davis & Co.'s Pure.
4. Brent, Goode & Co.'s Prorsi.
5. McKesson & Robbins's Concent.
6. Armstrong's Pure.
7. Kidder's Crust.
8. Kidder's Crust, Powdered.
9. North's Pure.
10. Frazer & Lee's Pure.
11. Jensen's Crystal.
12. Golden Scale.
13. Royal Pure.
14. Dieck's Pure.

German.

15. Witte's.
16. Finzelberg's.
17. Merck's Scale.
18. Merck's Powdered.

English.

19. Bullock & Co., Dr. Beal's.
20. Morson's Porci.

French.

21. Boudault's Acid.

The peptic power of all these brands varies so widely that, as there is no standard by which to gauge them apart, both physician and druggist must remain at the mercy of accident or chance unless some one takes time to carefully work out their comparative merits. The test of the United States Pharmacopœia is worse than useless. No two men can get any approach to the same results by following it. That of the British is better, but still deficient. No one can rub albumin through a sieve and get the same results twice. The worn-off brass and its oxidation products retard all peptic digestion. On carefully grinding up in a mortar at one time enough egg albumin from eggs that had been boiled ten minutes to supply five grammes to each of the brands named, and after making it so fine that when a small mass of it was shaken up in water and held before a bright light no piece was so large that it would not pass through a forty-mesh sieve, the amount named being placed in a two-ounce bottle with forty cubic centimetres of dilute hydrochloric acid containing 0·2 per cent. of absolute acid, when the amounts of pepsin opposite the numbers given were added, in a solution of ten cubic centimetres, 0·2 per cent. HCl, the bottles kept at a temperature of 48° C. to 50° C. for one hour in a water bath with a double partition keeping them from the metal in contact with the flame, and shaken every ten minutes, they all came out within five minutes of each other with the same small amount of insoluble matter in each. Many experiments were required to find out these figures, and care had to be taken to see that air particles did not get entangled with the albumin to keep it floating; otherwise a delay would have occurred. In each case from ten to fifty times the amount of pepsin given was weighed off and dissolved in an accurately measured quantity of dilute acid, so that the ten cubic centimetres just contained the required amount. Some of the home-made saccharated samples were not managed thus, owing to the bulk required. In one instance it took nearly three grammes to do the work. With this we took twenty c. c., leaving thirty c. c. to put with the albumin before adding the pepsin. This was prepared from a German brand of powdered, and nineteen parts of sugar of milk were added to one of it. The druggist was perfectly innocent of any intentional wrong in dispensing this. He had used an article made by a firm whose reputation for good goods is world-wide. They are no doubt themselves unconscious of the horribly poor quality of the stuff they are sending out to their patrons. It was diluted according to the formula recommended by several manufacturers of such goods. Think of it, physicians, and beware of your pepsin prescriptions if you want any results from them. This make, too, is used all over Europe as well as America, although over there they may not dilute it to one twentieth its normal strength as is done here. The scale pepsin of the same manufacturer, although also very poor, is nearly twice as good as the powdered. It is without exception the prettiest looking pepsin in the market. The scales glisten like silver, and look so clean and nice that, if we judged by mere appearances, we should take it every time in preference to all others:

SACCHARATED PEPSINS.

1.	$21\frac{2}{5}$	milligrammes,	or	1 to 234
2.	220	"	"	1 to 23
3.	$64\frac{1}{5}$	"	"	1 to 78
4.	$37\frac{1}{5}$	"	"	1 to 135
5.	29	"	"	1 to 172
6.	$44\frac{1}{5}$	milligrammes,	or	1 to 112
7.	174	"	"	1 to 29
8.	$171\frac{1}{5}$	"	"	1 to 30
9.	55	"	"	1 to 91
10.	$93\frac{1}{3}$	"	"	1 to 53

The poorest of these is beyond the requirements of the Pharmacopœia. It only requires one part to dissolve fifty parts in six hours. Here we have nearly one half of it dissolved in one hour. In six hours it would dissolve fully double the required amount. But what a wide difference in the different brands! No. 1 is ten times as strong as No. 2. The home-made articles are all far below the lowest of these, and simply because the druggist is misled by the false representations of the advertisers in medical and pharmaceutical journals. No man can follow the directions given and make an average sample of *pepsinum saccharatum* like that found in the market already put up. An examination of the pure pepsins, like that of the saccharated and under identical conditions, all being tested at once, gave the following results:

PURE PEPSINS.

1.	10	milligrammes,	or	1 to 500
2.	$10\frac{3}{10}$	"	"	1 to 486
3.	$10\frac{1}{2}$	"	"	1 to 475
4.	$10\frac{9}{10}$	"	"	1 to 459
5.	11	"	"	1 to 454
6.	$12\frac{2}{5}$	"	"	1 to 403
7.	$18\frac{3}{5}$	"	"	1 to 269
8.	$18\frac{4}{5}$	"	"	1 to 266
9.	$21\frac{2}{5}$	"	"	1 to 234
10.	$21\frac{3}{5}$	"	"	1 to 232
11.	$21\frac{1}{5}$	"	"	1 to 236
12.	25	milligrammes,	or	1 to 200
13.	48	"	"	1 to 104
14.	45	"	"	1 to 111
15.	$11\frac{1}{5}$	"	"	1 to 447
16.	22	"	"	1 to 227
17.	$80\frac{2}{5}$	"	"	1 to 62
18.	143	"	"	1 to 35
19.	8	"	"	1 to 625
20.	13	"	"	1 to 385
21.	20	"	"	1 to 250

It is highly probable that the same brand of pepsin will vary less or more, according to the quantity in the stomach of the animal at the time of death. The process of extraction will necessarily keep them from any wide variation, but there may be enough to reverse the positions of any two of nearly the same digestive power, if samples prepared at different times are used.

It will be observed that quite a number of these range below the best of the saccharated, although sold at much higher prices. The best in the lot is No. 19. It is of London make, and costs the large amount of $4 an ounce, so that it is out of the reach of many patients. The poorest is No. 18, and is from Germany. It has already been referred to. The cheapest of all is No. 1 of the saccharated samples, and is made in our own city. Whoever specifies and receives it gets more peptic power for the price charged than he could of any of the rest. Although only purporting to be a saccharated pepsin, it exceeds in digestive power many of the more pretentious and dearer articles. Among those possessing a high digestive power, and that must be used when a concentrated effect is necessary, No. 1 of the pure pepsins is the best, unless your patients are rich enough to pay for the English one already referred to. It is the best American pepsin for high peptic power. There is a class of goods now on the market known as peptone pepsins. The best of this kind is No. 11. You see from the figures given that it is only a shade better than the best saccharated, although costing six times as much. The high price charged for it, combined with the vast amount of advertising done in its behalf in our medical journals, has caused it to take precedence of most others in the pharmacies of this city. Never prescribe a peptone pepsin unless you give more than double the amount of it you would of any good pure pepsin, and then, remember, your patients' pockets will suffer. Where you must have a solution of pepsin in water, then the peptone pepsin is the very thing needed. Its great solubility gives it an increased value. Five compound pepsins containing pancreatin were found upon the market, and tested as to their peptic power only. The investigation of trypsin was deferred to a future time. These all had trade names attached to them, as follows: Lactopeptine, maltopepsine, speptine, dyspepsyn, and lactated pepsin. Their relative powers ranged as the names are here given. Such combinations can be of little worth to the physician. In the stomach, if the pepsin is of any value, the other ferments can not be, as they are likely to be themselves digested or altered. If the stomach fails to act, then in the alkaline duodenum pepsin is useless. Had time permitted, this matter would have been put to actual test. Another of the peptic ferments with a trade name is ingluvin. This is said to be prepared from the digesting part of the alimentary tract of chickens. As a digesting agent it is almost valueless, and can not convert its own weight of albumin into peptone in an hour. A long list of elixirs of pepsin and lactopeptine are upon the market and being pressed. None of them has the activity of a good wine of pepsin, and all those containing ammonio-citrate of bismuth are nearly worthless. Such a combination is only a delusion arising from the name bismuth. A soluble salt of bismuth can not be substituted for the insoluble ones when their value consists in the fact that they are insoluble. An elixir of pepsin under the name of digestylin is now being advertised by samples among physicians. Its digestive power is just one tenth that of Hawley's aromatic liquid pepsin.

We come now to the consideration of inorganic substances and their effects upon digestion. It is no doubt unnecessary to remind you of the fact that no peptic digestion is possible without some acid, and that therefore all alkalies, alkaline carbonates, and such forms of matter as are acted upon by hydrochloric acid, are contra-indicated when digestion is going on, and must never be prescribed with pepsin. To order bicarbonate of sodium and pepsin in the same prescription displays lamentable ignorance on the part of any physician, and yet it is frequently done. As well might you fasten two horses of equal strength back to back, and, by whipping them up, expect work to be done, as to hope for any benefit to your patient from such a combination. If an excess of the sodium is given, and acetic fermentation is going on, of course the patient will experience an advantage from taking it, but he would have had still greater benefit if the pepsin had not been given with it. As an illustration of the retarding effect of a drug because of its consuming the acid, iron reduced by hydrogen will answer. This one was quite a surprise when first discovered, although it should not have been so, as the inference *a priori* of its action is simple. The longer the iron is kept in contact with the acid, the more it retards. If put to digesting at once, the addition of an extra supply of acid hastens the work. Fifteen centigrammes delayed digestion 390 minutes after the two hours of the control experiment were up. By raising the acid strength to 0·4 per cent., the same amount only delayed 210 minutes.

The following list is that of the worst retarders yet found. Only five milligrammes, or one part in ten thousand, were necessary to produce the delay mentioned. The control time is already subtracted in this and all subsequent tables. The time is given in minutes only:

	Minutes.
1. Molybdate of ammonium	190
2. Molybdenate of sodium	180
3. Permanganate of potass'm	130
4. Chloride of platinum	60
5. Potassio-mercuric iodide	60

The next list comprises those that allowed digestion to finish after delaying the indicated time, when one centigramme, or one part in five thousand, was used. The two hours of control time are extracted:

	Minutes.
1. Ammonio-ferric alum	330
2. Ferricyanide of potassium	320
3. Ferrocyanide of potassium	260
4. Sulphate of iron	130
5. Bichromate of potassium	130
6. Chromate of potassium	60
7. Sol. of perchloride of iron	50
8. Salicylate of lithium	30
9. Chloride of gold	20
10. Bichloride of mercury	15
11. Sulphate of sodium	15
12. Sulphate of potassium	15

The following were tested from 150 up to 50 milligrammes, and when of the latter strength they delayed as follows:

	Minutes.
1. Ammonium sulphite	460
2. Magnesium sulphate	330
3. Iron and potass. tart.	290
4. Antimony and potass. tart.	100
5. Mercuric nitrate	80
6. Cadmium iodide	50
7. Sodium hyposulphite	20

The next long list is composed of such non-organic drugs as digested the submitted albumin in the time named, plus the two hours of control time, when fifteen centigrammes were added to the fifty grammes. The proportion was therefore three parts to one thousand.

	Minutes.
1. Chloride of ammonium	320
2. " " calcium	250
3. " " sodium	200
4. Chloride of antimony	160
5. " " potassium	90
6. " " lithium	60
7. Bromide of iron	360
8. " " ammonium	200
9. " " lithium	120
10. " " sodium	100
11. " " cerium	90
12. " " potassium	60
13. Iodide of potassium	200
14. " " arsenic	190
15. " " sodium	180
16. " " ammonium	170
17. " " lead	60
18. " " calcium	5
19. Nitrate of sodium	450
20. " " potassium	390
21. " " strontium	380
22. " " uranium	310
23. Benzoate of sodium	160
24. " " ammonium	160
25. " " lithium	140
26. " " potassium	110
27. Sulphide of potassium	650
28. Sulphate of ammon. and alumin	750
29. Sulphate of copper	720
30. " " magnesium	690
31. Hypophosphite of manganese	80
32. Hypophosphite of sodium	60
33. Hypophosphite of potassium	40
34. Chlorate of sodium	280
35. " " potassium	200
36. Acetate of sodium	30
37. " " ammonium	30
38. Sulphocarbolate of zinc	140
39. " " sodium	80
40. Phosphate of iron	60
41. " " sodium	30
42. Salicylate of sodium	690
43. " " potassium	360
44. Valerianate of ammonium	60
45. " " zinc	30
46. Ammon. citr. of iron	410
47. " " " bismuth	90
48. Sulphite of sodium	330
49. Citrate of iron, U. S.	60
50. Oxalate of cerium	60
51. Lactophosphate of calcium	10
52. Biborate of sodium	10
53. Arsenate of sodium	10
54. Cyanide of potassium	5

A glance over this list shows that the sulphates are the most active inhibitors of digestion. Among the alkaloidal salts the same was the case. Why sulphate of quinine ever came to be so universally prescribed in preference to the much better chloride is hard to tell. The same is true of sulphate of morphine. In the chlorides there is more of the active principle to the same weight, they are much more soluble in the gastric juice, and they retard digestion less. Next to the sulphates the nitrates are the great retarders. The bromides average lower than the chlorides, while the latter are about even with the iodides. Bromide of iron ranges high, like many of the iron non-organic salts. Dialysed iron and the solution of pernitrate of iron retarded respectively 150 and 110 minutes when fifteen centigrammes were used, which is lower than the run of their class. The salicylates are far above the benzoates, and the chlorates hinder much more than the chlorides. The general run of all agrees very well with the activity of their acids, according to a preceding table. The next list comprises those having the least retarding power of any tried. When fifteen centigrammes were used, no effect could be perceived. The amount was therefore doubled, thus making three parts in five hundred.

1. Acetate of potassium	280
2. Citrate of potassium	90
3. Phosphate of calcium	60
4. Tartrate of potassium	50
5. Rochelle salts	20
6. Acetate of lead	5

It has been observed during this investigation that antiseptics averaged high as retarders, and an approach is made by them in this power that runs nearly parallel with their germ-destroying power. Potassio-mercuric iodide, the most potent germicide known, was found to hold back digestion one hour when only one part in ten thousand was used. Bichloride of mercury required but one part in five thousand to retard fifteen minutes. While there are substances not known to be germicides that retard still more, still it is somewhat curious to find this class range so high, and at the same time occupying positions toward each other that suggest the order of their germ-destroying power. The molybdates seem to lead everything else as inhibitors, and they are the very best-known precipitants of peptone. Homœopathists should make some "provings" upon the salts of molybdenum, and use them as cures for dyspepsia. They would certainly have similar results from the drug as from the disease.

THE DEVELOPMENT AND PROGRESS OF AMERICAN DERMATOLOGY

FROM THE STANDPOINT OF THE GENERAL PRACTITIONER.

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At the tenth annual meeting of the American Dermatological Association, held at Greenwich, Conn., on Wednesday, August 25, 1886, "the president, Dr. Edward Wigglesworth, of Boston, opened his address with the remark that it was just ten years since he had the honor of calling to order the first public meeting, at Philadelphia, for the organization of the association, when for the first time the specialty of dermatology received national acknowledgment. But, he said, its guerrilla warfare was now over, and its record since that time had been one of successive victories over bigotry, error, and ignorance."

The "New York Medical Journal," from which we make this extract, in an editorial thus refers to the president's remarks:

> "As he spoke of the association's progress since its organization, ten years ago, as a career of unbroken victories over bigotry, error, and ignorance, we must infer either that he was stretching to its utmost limit the freedom generally accorded to a public speaker in dealing with facts, or else that he has been cognizant of some manifestations of 'bigotry, error, and ignorance' that we have failed to detect. Far from having observed anything that could properly be called hostility on the part of the much-lectured general practitioner to the recognition of dermatology as a specialty, we have been under the impression—an impression formed from some familiarity with our dermatologists and their work, and amounting to a conviction—that it was generally acknowledged in the profession that American dermatology occupied a most creditable position.
>
> "It is well known that the pure dermatologists, those who practice dermatology and nothing else, are few and far between.
>
> "On the contrary, most of them (and they are among the most meritorious, too, as dermatologists) are engaged in general family practice, and many of them have achieved distinction in other special branches—branches that they have by no means given up, and presumably have no thought of giving up.
>
> "It may be that the exclusive specialists have a subtler knowledge of dermatology than others have dreamed of; we can only judge of the matter by the teaching that emanates from them. Applying that test, we feel constrained to say that a fair, if not the greater, share of American achievement in dermatology is the work of men who are not exclusive practitioners in that department."

The organization was started ten years ago—in 1876. Now let us retrace our steps and show—by documentary testimony—the erroneous character of Dr. Wigglesworth's statements. We will lead him back sixteen years. Let us first recall, however, the address of the president of the same organization on "The Rise of American Dermatology," delivered by Dr. Louis A. Duhring, of Philadelphia, at the third annual meeting, held in New York city, August 26, 1879, published, *in extenso*, in the "New York Medical Journal," November 1, 1879. Dr. Duhring recites every little incident and item connected with dermatology in America which could possibly aid in making history, and finally he says:

> "With the year 1870 a new and promising era, full of vitality and spirit, opened upon the dermatology of our country, signalized in the first instance by the appearance of 'The American Journal of Syphilography and Dermatology,' under the editorial management of Dr. M. H. Henry, of New York. This publication must always be regarded as an important event in the history of American dermatology, for it was unquestionably the means of calling forth a considerable amount of substantial interest in this branch of medicine, as well as much good work, which without such a stimulus would probably never have been produced. The journal throughout its career was ably conducted by its editor, who, together with the untiring exertions of his collaborators, obtained for it an honorable position abroad as well as at home. It contained many meritorious original contributions, translations, abstracts, as well as reviews, representing a large amount of faithful work which could not fail to exert a most salutary effect. During these years American dermatology was born and began to grow, slowly but surely, and vigorously, gaining strength from year to year as new and zealous workers, some of them men of talent, came prominently on the field."

Dr. Duhring's opportunities of acquiring a thorough knowledge of dermatology were never less than those of Dr. Wigglesworth. The former has furnished abundant evidence of his superiority and privilege of speaking authoritatively by his contributions and devotion to this branch of medicine.

Let us go a little farther back—to January 1, 1873—when Dr. Tilbury Fox, of London, issued the third and enlarged edition of his classic work on skin diseases—a work that has not been excelled up to this time. See what he says in his preface:

> "I think the profession in general, and dermatology in particular in America, owes much to Dr. Henry for the excellent 'Journal of Dermatology' which he originated and so ably conducts; and I can not forbear at the same time acknowledging how much I am personally indebted to him as the editor of the American edition of my work."

Does this really look as if we were—late in 1876—in a state of "bigotry, error, and ignorance," only rescued from this disgraceful and unhappy condition after ten years of "guerrilla warfare" waged by the American Dermatological Association? Disclaiming any intention of what might, perhaps, be termed severe criticism, we submit in evidence some crisp and sparkling extracts from the "Boston Medical and Surgical Journal." The first is from the issue of November 23, 1871. It is entitled "Fox on Skin Diseases," a review, by Edward Wigglesworth, Jr., M. D., Boston.

> "Previous to January, 1871, the current medical literature of America was unrepresented in a most important branch, that of dermatology. Since then we owe to the professional zeal and patient labor of Dr. M. H. Henry a journal devoted to the

interests of this specialty, which in scope and plan may challenge comparison with all others. One want, reflecting discredit upon us all, being thus ably supplied, Dr. Henry now appears again before the profession to supply another—namely, that of a practical compendium in our own language of the dermatological knowledge of the present day.

"Until to-day, with the exception of translations from the German, incomplete or difficultly obtainable, America has furnished no work of this sort, and England but four worthy of mention. Before the ponderous tome of Wilson the general student shrinks aghast; the specialist is by no means satiated by the little *vade mecum* of Hillier; and Anderson's works are monographs. For a manual, concise and yet complete, scientific and practical, we have in fact only the two treatises of Dr. Tilbury Fox, and it is the combined revisions of their latest editions which Dr. Henry now offers to the medical public.

"The reputation of Dr. Fox as a dermatologist needs no testimony from us. His scientific and clinical knowledge, his devoted perseverance and untiring energy, have made him the exponent and University College Hospital the representative institution of the most advanced and best dermatology of Great Britain. To his personal efforts the hospital owes the most extensive and elaborate system of baths possessed by any hospital in the world, except the similar ones at the St. Louis in Paris. We hail with joy this American reproduction of the results of Dr. Fox's labors, and re-echo cordially Dr. Henry's own words: 'I know of no book on dermatology in our language that combines so completely the results of a thorough knowledge of the pathology of skin diseases, such sound clinical observation, and so rational a system in the application of therapeutics.'

"The first chapter treats of the importance of the study of skin diseases, and insists upon the fact that, like other true specialists, the dermatologist, 'the only efficient treater of cutaneous ailments, is he who is master of the details of general therapeutics,' specialism being an addition to and not a substitution for general medicine. The interdependence of function between the skin and the internal organs is brought to our notice, and the consequent frequent necessity for the administration of internal remedies in cases of cutaneous affections."

We could add largely to the number of pleasant and flattering notices of our labors published in the "Boston Medical and Surgical Journal" during the early years of the "Journal of Dermatology," mostly signed E. W. and W., all standing for Edward Wigglesworth, Jr., M. D., of Boston. Space, however, in the Journal in which this appears is too valuable for additional quotations from this source. Before leaving Boston we desire to mention that Dr. James C. White, professor of chemistry and dermatology at the Harvard Medical School, called attention to the condition of cutaneous medicine in the United States in a very thorough review on "Modern Dermatology," published in the April issue, 1871, of the "American Journal of the Medical Sciences." His allusions were candid and flattering, and did justice to the journal we edited, and the state of dermatology in America at that time.

The first issue of the "American Journal of Syphilography and Dermatology" appeared in January, 1870. A few sentences taken from the "introduction" tell of the purpose and scope of the journal:

"In the whole range of scientific medicine and surgery there are not at the present time any two branches of deeper or more interest to the practitioner of medicine than syphilography and dermatology; such is our reason for laying before the medical profession of America a quarterly journal specifically devoted to the exposition and study of venereal and cutaneous diseases."

"The editor can only regard specialties and general practice as mutually supportive, and believes he is the best specialist who does not suffer himself to lose sight of the general current of medical science; and, as a corollary, he is the best general practitioner who keeps close watch of the labors of special investigators."

The journal was discontinued in 1875. The reasons of its discontinuance were given in a circular to its subscribers at the time:

"Yielding to the wishes of a large number of professional friends, we commenced, in January, 1870—five years ago—the publication of the journal. There seemed to be a desire on the part of the general profession to cultivate a better knowledge of venereal and skin diseases. The investigations of a really scientific character in this department of medicine were made and published mainly in Germany, France, Italy, and England, and seldom placed before American readers. It was, therefore, deemed advisable to establish a special journal, in order that the subjects could be treated in a large manner, and the contributions of the great masters placed before American students soon after their publication abroad.

"Knowing, from experience, that success in the pursuit of science depended on the manner and methods of study, our purpose has been to place before our readers the best works of the best teachers *in extenso*, that they might acquire *not merely the results of observations, but the manner of making and recording them;* this, we felt, was the only course at all likely to accomplish good results. We exerted, at the same time, our best efforts to secure the co-operation of those at home who were studying special diseases.

"For years we have continued the publication at a great cost of time, labor, and money. The vicissitudes incidental to the publication of such a journal—conducted in the manner in which we have endeavored to conduct it—can be known only to those who have been directly engaged in similar undertakings. The demands made on our time—the care of a large hospital and private practice combined—now force us to discontinue the publication.

"We derive satisfaction in the knowledge that our efforts have been appreciated, both at home and abroad, by those best competent to judge of our work. We have the additional satisfaction of knowing that our efforts have stimulated other journalists to devote more space to the consideration of venereal and skin diseases. In fact, such good attention is now paid to these branches in the leading American journals, such as the 'American Journal of the Medical Sciences,' the 'New York Medical Journal,' the 'Boston Medical and Surgical Journal,' the 'Philadelphia Medical Times,' the 'American Practitioner,' the 'Medical and Surgical Reporter,' and many others, that a special journal is scarcely of much assistance except to the few so-called pure specialists."

The advancement of our knowledge of the nature and treatment of disease depends on the exactness of our records. It has become a question of veracity as well as of capacity.

Dermatology is, beyond question—absolutely—a branch of practical medicine. It can only be followed successfully by those who have had broad experience in the range of general practice, and who still maintain a knowledge of general practical medicine to aid in the differentiation of diseases and the best means for their relief.

THE
NEW YORK MEDICAL JOURNAL,
A Weekly Review of Medicine.

Published by
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Edited by
Frank P. Foster, M. D.

NEW YORK, SATURDAY, DECEMBER 11, 1886.

TUBERCULAR INFECTION IN MAN.

Long before the tubercle bacillus was discovered it was popularly held that consumption was contagious, and the belief is still prevalent among people who are ignorant of Koch's discoveries. It is true that for the most part the evidence adduced by these persons to support their opinion is far-fetched and flimsy. For example, a physician was recently called to a case of advanced phthisis in which the patient thought that he had contracted the disease from his brother's wife. When he was asked why his brother also had not acquired it, the fallacy of his reasoning became evident to him. Many of the alleged instances of tubercular infection in man, as we find them recorded in medical literature, have for their foundation a fabric of evidence not much stronger. But within the past few years testimony of a kind that can not easily be shaken has been offered which goes far toward showing that direct tubercular infection may occur in the human subject. The most plausible instances have been afforded by the rite of circumcision as practiced by orthodox Hebrews in some parts of Russia and Germany. This consists in cutting off a portion of the prepuce, tearing the inner layer with the finger-nails and turning it back over the glans, after which the wound is sucked by the operator in order to stop the bleeding. It is well known that the syphilitic virus has often been transferred to the child from a mucous patch in the operator's mouth, and the "Berliner klinische Wochenschrift" has recently recorded instances in which it would seem that tuberculosis was imparted in the same way. A child of healthy parentage was circumcised on the eighth day, and the wound was sucked by the operator. Shortly afterward an ulcer appeared at the situation of the incision, which had partly healed; then followed enlargement of the inguinal glands, necrosis of the radius, and marasmus, and the child died at the end of five months. An autopsy was not allowed, but a portion of the prepuce and an inguinal gland were removed and examined microscopically. They showed broken-down masses, cheesy tubercles, giant-cells, and tubercle bacilli—numerous at the periphery, but few in number toward the center of the cheesy masses. The operator was then examined (but at what date is not stated), and was found to be the subject of incipient phthisis, showing itself by dullness at one apex, some cough, and slight expectoration, the sputum containing a few tubercle bacilli. Of course, it can not be said definitely that the operator in this case was suffering from tuberculosis at the time of the operation.

Lehman's ten cases, observed in 1879, seem more conclusive. From February 2d to April 19th, nineteen children were circumcised by a sufferer from advanced phthisis, which proved fatal a short time after the latter date. Of the nineteen children, ten had the wound sucked by the operator, and, in from eight to twelve days after the operation, every one of them had a small tubercle at the site of the incision, which had partly healed. The tubercle soon formed a dry, flat, grayish-looking ulcer, followed in three weeks by enlargement of the inguinal glands, some of which were opened and discharged caseous masses with little or no pus. Then occurred necrosis of bone, cold abscesses, marasmus, and in one child tubercular meningitis. None of the children had any inherited tuberculous taint. The disease proved fatal in seven cases after periods varying from 260 to 577 days. An anti-syphilitic treatment was rigorously carried out with all but two of the children, and those two were among the three that recovered. The early appearance of the primary sore, the absence of constitutional manifestations of syphilis, and the futility of anti-syphilitic treatment in these cases, do away with any suspicion of syphilitic infection. Moreover, the operator was examined carefully at the time of the infection, and no sores of any kind were detected in the mouth or on the lips, nor could any history of syphilis or any signs of its presence be made out. Lindman observed two similar cases in 1873, which he published ten years later.

In a letter from our Vienna correspondent, published in the number for August 21st, an exceedingly interesting section on this subject is to be found, the cases mentioned in which add strong corroborative evidence of the transmissibility of tuberculosis in man by infection.

ARE SMALL-POX AND COW-POX ONE AND THE SAME DISEASE?

Under this heading, Dr. George Fleming, principal veterinary surgeon of the British army, writes to the editor of the "Lancet" in support of the negative view of the question—a view that he, almost alone among British observers, has steadily upheld. Reverence for Jenner is most creditable from a sentimental point of view, but it seems as if it had in some measure taken the place with our British brethren of the unbiased spirit in which the solution of such a problem as that of the natural relations between small-pox and cow-pox ought to be approached. The doctrine of the essential identity of the two diseases was upheld by Dr. Seaton, whose knowledge of the practical matters connected with small-pox and vaccination was everywhere held in the highest respect; it was supported by experiments undertaken by so competent an observer as Mr. Ceely; and it derived no little confirmation, in the minds of practitioners who had given no special thought to the subject, but looked rather at results, from Mr. Babcock's reputed achievements in converting variolous into vaccinal virus.

There is nothing very convincing in all these considerations, but (in spite of the conclusions reached by a Lyons commission several years ago, founded on most elaborate and careful experiments, the published account of which was prepared by M.

Chauveau, a member of the commission) they have been accorded such importance in the United Kingdom that it is not to be wondered at that Dr. Pavy, in a recent Harveian Oration, should have felt safe in saying: "It may now be regarded as an accepted conclusion that vaccine lymph is the virus of small-pox, modified by transmission through the cow." That conclusion is undoubtedly the one accepted in Great Britain, but, if it is long to continue the accepted conclusion, it will have to be propped up by better evidence than has heretofore been brought to light, for the question has too close a connection with subjects that are now being studied with the most intense interest all over the world to be allowed to hang much longer on what, barring Mr. Ceely's testimony, is not entitled to be ranked very far above tradition. Besides this, the question has a practical importance of its own, for, as Dr. Fleming remarks, at least three serious accidents have resulted from carrying the prevalent conclusion into practice. Speaking of Mr. Ceely's experiments, Dr. Fleming says: "It must be remembered that he, at the same time, was experimenting with vaccine lymph, and the great probability is that he employed the latter when he thought he was using the former. At any rate, he never afterward succeeded in repeating his presumed success, though his subsequent trials were made under the most favorable conditions. The last attempt was undertaken not long ago, and only a short time before his death. On that occasion twelve heifers were purchased by the Local Government Board and lodged in the Brown Institution, where they were inoculated by Dr. Klein, under the supervision and direction of Mr. Ceely, and, though small-pox matter was literally poured into the incisions, and the greatest care was observed throughout, yet cow-pox was not developed in any of the animals. Similar failures have attended all other attempts, when these have been made openly and by two or more individuals."

Five or six years ago the "Lancet" published a series of most valuable articles on this subject, by Dr. Fleming, and we are glad to see that that most capable veterinarian still has the heart to raise his voice against the routine acceptance of a doctrine having such a flimsy foundation.

A MODIFICATION OF THE PASTEUR METHOD OF PREVENTING RABIES.

In M. Pasteur's latest communication on the subject of his system of inoculations for the prevention of rabies, made before the *Académie de médecine* on the 2d of November, and published in a recent issue of "Progrès médical," he presented a most encouraging statement in general terms of the effect which the adoption of the method had had on the mortality from rabies in the Paris hospitals. It seems that, for five years preceding the use of the inoculation practice, there had been an average of twelve deaths from the disease in those institutions, whereas, from November 1, 1885, to the date of the communication, there were only three. Two of these three deaths were those of persons who had not been subjected to inoculations according to M. Pasteur's system, while the third was that of a person on whom they had been practiced, but not after the intense and repeated courses that M. Pasteur now considers necessary in certain cases.

Reflecting upon this case and upon the other cases of death after the employment of inoculations, M. Pasteur first remarks that they happened for the most part in instances of children bitten in the face. He has come to the conclusion that, for this class of cases, a more energetic course or series of courses of inoculations is necessary than in ordinary instances of bites of rabid animals. Now, in cases of wounds of the face or head, and of deep wounds of the limbs, the progress of the treatment is hastened, so that the use of very virulent matter is speedily arrived at. On the first day of the treatment, spinal cords of twelve, ten, and eight days are inoculated at 11 o'clock, at 4 o'clock, and at 9 o'clock respectively; on the second day, cords of six, four, and two days are employed at the same hours; on the third day, cords of one day are used. Then a second course is undertaken, beginning on the fourth day with cords of eight, six, and four days, and continued on the fifth and sixth days with cords of three and two days and those of one day; and a third course is begun on the seventh day with cords of four days, continued on the eighth day with cords of three days, and on the ninth day with cords of two days, and finished on the tenth day with cords of one day.

Three courses, then, are gone through with in the period of ten days, each of them culminating in the use of very virulent material; and, in certain instances where delay has occurred in subjecting the patients to the treatment, still further courses are pursued, with intermissions of a few days, so that the treatment covers altogether the space of four or five weeks, the most dangerous period, according to M. Pasteur, for children bitten in the face. This plan had been in operation for two months at the time the paper was read, and the results were reported to have been very favorable. It is to the adoption of this intense treatment, as the modified method is called, that M. Pasteur ascribes the safety of sixteen of the Russian patients who were subjected to it, the three others having died during or after the simple course of inoculations in use before. In the same communication M. Pasteur pointed out certain facts to account for von Frisch's failure to save animals inoculated by the trephining method.

MINOR PARAGRAPHS.

THE NEW STATE HEALTH COMMISSIONERS.

In appointing ex-Senator Newbold to succeed the late Mr. Brooks on the State Board of Health, Governor Hill seems to have made a judicious choice. It is in the new medical member of the board, however, that the profession in the State will feel more directly interested. It is gratifying to know that so capable a man as Dr. Perkins has been selected, and we trust that nothing will interfere with his acceptance of the position. In the early part of his professional career Dr. Perkins was an instructor in chemistry at the College of Physicians and Surgeons, and since then he has filled the important post of professor of chemistry at Schenectady. The advantage of having a chemist in the board is obvious, but in Dr. Perkins we have a chemist who is also an active practitioner of medicine and a keen observer in matters pertaining to the welfare of the medical profession, as is well known to those who have met him at recent meetings of the Medical Society of the State of New York.

ITEMS, ETC.

Infectious Diseases in New York.—We are indebted to the Sanitary Bureau of the Fourth Division of the Health Department for the following statement of cases and deaths reported during the two weeks ending December 7, 1886:

DISEASES.	Week ending Nov. 30.		Week ending Dec. 7.	
	Cases.	Deaths.	Cases.	Deaths.
Typhus	1	1	0	0
Typhoid fever	31	10	25	11
Scarlet fever	21	7	28	1
Cerebro-spinal meningitis	3	3	3	3
Measles	323	42	452	50
Diphtheria	84	41	126	55

The New York State Board of Health.—It is announced that the vacancies caused by the resignation of Dr. Moore and the death of Mr. Brooks are to be filled at once, the Governor having appointed Dr. Maurice Perkins, of Schenectady, and Mr. Thomas Newbold, of Poughkeepsie, members of the board.

The late Dr. Edward J. Darken.—At a meeting of the medical staff of the Demilt Dispensary, New York, held December 7, 1886, the following resolutions were adopted:

Whereas, It has pleased an All-wise Providence to call suddenly from our midst our late friend and colleague, Dr. Edward J. Darken,

Resolved, That, while recognizing that, in a peculiar manner, he was fitted to exchange this life for the next, we are, nevertheless, deeply conscious of the loss to this institution of one whose wisdom, experience, sound judgment, and eminent qualification for the important trust which he held for a period of twenty years, have been of inestimable value to the dispensary, and have contributed in no small degree to its success.

Resolved, That in his death the State has lost a self-sacrificing patriot, a loyal citizen; the profession of medicine an ardent and accomplished member; this institution a sagacious and faithful executive; the poor, to whom he ministered with loving zeal, a large-hearted, generous helper, a wise adviser, a true friend.

Resolved, That we, both as a staff and individually, desire to bear affectionate testimony to the never-failing gentleness, brightness, and geniality of his disposition, and to the purity, sincerity, and heroism of his character—a heroism proved indeed during his distinguished military career, and then publicly acknowledged, but far more conspicuous and eloquent in the perfect patience and the steadfast equanimity with which he endured the unusual burden which afterward he was called upon to bear.

Resolved, That to his family we tender our cordial sympathy for the unspeakable loss which they have sustained.

Resolved, That a copy of this memorial be presented to the trustees of the Demilt Dispensary, with the request that it be placed upon the records of the institution; and that it be also published in the current medical journals.

[Signed.]
Joseph E. Winters, M. D.,
W. M. Leszynsky, M. D.,
D. Bryson Delavan, M. D.
Committee.

The late Dr. John P. Gray.—"The Faculty of the Bellevue Hospital Medical College learn with deep sorrow of the death of Dr. John P. Gray, Professor of Psychological Medicine and Medical Jurisprudence; and the secretary has been instructed to enter in the minutes an expression of profound appreciation of the loss sustained in the death of their late colleague.

"Dr. Gray became associated with the college, as professor of psychological medicine and medical jurisprudence, May 20, 1875. His commanding position in the profession, at that time as well as now, was universally acknowledged. His strong and sterling qualities as a man, his amiable and courteous disposition and bearing as a friend and colleague, his profound learning, and his brilliant gifts as a teacher, endeared him to his associates, and commanded the admiration and respect of all who knew him or had the advantage of his instruction. In his death the college, the State, and the profession have lost a man whose honorable and conspicuous position will long remain unfilled."

Extract from the minutes of the Faculty.

Austin Flint,
Secretary.

December 1, 1886.

A Conditional Bequest to a Hospital.—The will of the late Mrs. C. W. Chapin, of Springfield, Mass., provides that the Springfield City Hospital shall receive the sum of $25,000 if a like sum is subscribed, and if the city gives the present hospital property.

Army Intelligence.—*Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from November 21, 1886, to December 4, 1886:*

Irwin, B. J. D., Lieutenant-Colonel and Assistant Medical Purveyor. Relieved from temporary duty in New York city, and of the charge of the medical purveying depot in that city, and ordered to San Francisco, Cal., to take charge of the medical purveying depot in that city. S. O. 270, A. G. O., November 19, 1886.

Town, F. L., Major and Surgeon. Ordered from Fort Clark, Texas, to Post of San Antonio, Texas, to relieve Surgeon J. P. Wright. S. O. 159, Department of Texas, November 15, 1886.

Gibson, Joseph R., Major and Surgeon. Ordered for duty as Post Surgeon, Fort Lyon, Col. S. O. 134, Department of the Missouri, November 20, 1886.

Moseley, Edward B., Captain and Assistant Surgeon. Directed to take charge of the medical purveying depot, San Francisco, Cal., until the arrival of a proper bonded officer. S. O. 99, Division of the Pacific, November 19, 1886.

Powell, J. L., Captain and Assistant Surgeon. Ordered for duty as Post Surgeon, Fort Supply, Indian Territory. S. O. 134, Department of the Missouri, November 20, 1886.

Egan, Peter R., First Lieutenant and Assistant Surgeon. Assigned to duty at Fort Clark, Texas. S. O. 162, Department of Texas, November 22, 1886.

Walker, Freeman V., First Lieutenant and Assistant Surgeon. Assigned to duty at Fort McIntosh, Texas. S. O. 159, Department of Texas, November 15, 1886.

Clendenin, Paul, First Lieutenant and Assistant Surgeon, recently appointed. Ordered to report to commanding general, Department of Texas, for assignment to duty. S. O. 271, A. G. O., November 20, 1886.

Johnson, Henry, Captain and Medical Storekeeper, will, in addition to his present duties, assume charge of the medical purveying depot in New York city as acting assistant medical purveyor. S. O. 270, A. G. O., November 19, 1886.

Caldwell, Daniel G., Major and Surgeon. Granted twenty days' extension of his leave of absence. S. O. 278, A. G. O., December 1, 1886.

Brown, P. R., Captain and Assistant Surgeon. Leave of absence for seven days, granted by Post Orders, is extended twenty-three days. S. O. 124, Department of Arizona, November 24, 1886.

Moseley, E. B., Captain and Assistant Surgeon. Relieved from duty as attending surgeon in San Francisco, Cal. S. O. 99, Division of the Pacific, November 19, 1886.

Tesson, Louis S., Captain and Assistant Surgeon. Granted leave of absence for four months, to date from November 13, 1886. S. O. 278, A. G. O., December 1, 1886.

Wakeman, William J., First Lieutenant and Assistant Surgeon. Leave of absence extended three months. S. O. 274, A. G. O., November 26, 1886.

McCaw, W. D., First Lieutenant and Assistant Surgeon. Granted leave of absence for two months, to take effect when his services can be spared. S. O. 274, A. G. O., November 26, 1886.

Clendenin, Paul, First Lieutenant and Assistant Surgeon. Assigned to duty at Fort Davis, Texas. S. O. 166, Department of Texas, November 29, 1886.

Anderson, C. L. G., First Lieutenant and Assistant Surgeon, recently appointed. Ordered for assignment in the Department of Arizona. S. O. 277, A. G. O., November 30, 1886.

Ball, Robert R., First Lieutenant and Assistant Surgeon, recently appointed. Ordered for duty in the Department of the Missouri. S. O. 278, A. G. O., December 1, 1886.

Naval Intelligence.—*Official List of Changes in the Medical Corps of the United States Navy for the week ended December 4, 1886.*

Farewell, W. G., Surgeon. Detached from the Kearsarge and to proceed home and wait orders.

Gatewood, J. D., Passed Assistant Surgeon. Detached from the Kearsarge and to proceed home and wait orders.

Society Meetings for the Coming Week:

Monday, *December 13th:* New York Academy of Medicine (Section in Surgery); New York Ophthalmological Society (private); New York Medico-historical Society (private); New York Academy of Sciences (Section in Chemistry and Technology); Lenox Medical and Surgical Society (private); Boston Society for Medical Improvement; Gynæcological Society of Boston; Burlington, Vt., Medical and Surgical Club; Norwalk, Conn., Medical Society (private).

Tuesday, *December 14th:* New York Medical Union (private); Medical Societies of the Counties of Chemung (Elmira), Morris (semi-annual), and Rensselaer, N. Y.; Newark (private) and Trenton (private), N. J., Medical Associations.

Wednesday, *December 15th:* Harlem Medical Association of the City of New York; Northwestern Medical and Surgical Society of New York (private); Medical Societies of the Counties of Alleghany (quarterly) and Tompkins (semi-annual—Ithaca), N. Y.; New Jersey Academy of Medicine (Newark); Philadelphia County Medical Society (Clinico-pathological); Strafford, N. H., District Medical Society (annual—Dover).

Thursday, *December 16th:* New York Academy of Medicine; New Bedford, Mass., Society for Medical Improvement (private); Addison, Vt., County Medical Society (annual).

Friday, *December 17th:* Chicago Gynæcological Society.

Saturday, *December 18th:* Clinical Society of the New York Post-graduate Medical School and Hospital.

Obituaries.

Edward J. Darken, M. D.—The death of Dr. Darken removes one whose character and career were so remarkable that to allow the event to pass unnoticed would be an injustice to his memory and the loss of a valuable lesson to his friends. His story, simply told, is that of an ardent, genial, pure nature, waging an unequal battle with the affairs of life, and in every relation showing a development of strength, faithfulness, and patience such as is seldom seen—a veritable inspiration for good to all who knew him.

Dr. Darken was born in Derby, Conn., January 29, 1836. His father was a physician and apothecary, and it was through him undoubtedly that the subject of this notice gained that love for medicine which became one of his strongest characteristics. Subsequently he studied with Dr. Philip E. Jones, of New York city, and graduated from the old New York Medical College in Thirteenth Street in 1858. After serving a year as one of the resident physicians to the Colored Home, New York, he was appointed to a position in the Demilt Dispensary, where he remained until 1861. The war of the rebellion being then in progress, Dr. Darken went as a contract surgeon to Bedloe's Island, and stayed there until April, 1863, when he presented himself before the examining board of the regular army, and, having passed successfully, was appointed assistant surgeon in the army. He then served in active campaign with the Eighteenth Infantry under Captain R. B. Hull until March 13, 1865, when for faithful and meritorious service in the field he was appointed captain by brevet, and ordered to Louisville to take charge of the officers' hospital, from which place a year later he was ordered to Fort Smith, Ark. Afterward he was stationed at Fort Hamilton for about a year, and finally transferred to Vicksburg. Having suffered seriously in health from exposure in the field, he resigned from the army in 1868, and the year following was appointed house physician to the Demilt Dispensary. This position he held to the day of his death. Such in brief are the details of his history—a record which is in itself the evidence of an honorable, if not throughout an eventful, career.

Dr. Darken's life could hardly be called an uneventful one, however. There are days which seem as years, and the period of his active army service was to him a lifetime of strange adventure, stirring activity, courageous self-sacrifice, and loyal devotion. It left upon him an impression such as only an experience of so great force and intensity could. Nothing was finer than to see the fire of enthusiasm kindle in his eyes at a reference to the experiences of that trying time; nothing more beautiful than to hear the tributes paid by his personal comrades to the noble part which he himself had played. The war record of Dr. Darken was a faithful index of the man. Every one who met him became his friend. There was that about him which inspired instant confidence. Possessed of the largest charity, and true as steel, he could not have been otherwise than beloved and trusted of all men. Brother officers, Fellows of his own profession, honored members of the board under which he served, patients rich and poor, the suffering and helpless ones to whom he especially ministered, all of these appreciated and respected him alike; to all his loss is real and personal. As a legacy of his military life, unfortunately, he early developed a form of rheumatic trouble so serious that, in the case of a less courageous man, he would have succumbed to helpless invalidism. For years his home and his office were his world. But he was a philosopher of the truest order. Under this discipline his bright qualities only glowed with greater luster. His unfailing patience and equanimity, his cordial geniality toward and interest in others, his gentleness and forbearance, often under severe suffering and annoyance, were too remarkable ever to be forgotten, too eloquent not to serve as an example. His memory will be a cherished treasure, a worthy inheritance.

D. B. D.

OBITUARY NOTES.

Cridland C. Field, M. D., of Easton, Pa., died suddenly on Friday, December 3d, in the seventieth year of his age. He was born on board the ship Ann within the confines of Queens County, New York, and the name of the ship's captain, Crocker, who wrapped the infant in the American flag, was given him as a middle name. He was graduated from the Medical Department of the University of Pennsylvania in 1837, and shortly after he settled in Easton, where he made a good reputation as a physician and surgeon. In the latter capacity he performed many serious operations and acquired a somewhat extended reputation, being called in consultation in his own and neighboring States. He was especially kind to the poor and needy, to whom he gave his services gratuitously. Dr. Field was the third of his family to adopt the profession of medicine, his father as well as his grandfather having been physicians, and he leaves two sons, both of whom are in the profession.

A. F. Ehrich, M. D., of Baltimore.—A press dispatch announces that Dr. Ehrich died on Tuesday of this week, of apoplexy, at the age of forty-nine. The deceased had made a number of meritorious contributions to the advance of gynæcology, in which department of medicine he was a most promising practitioner. In particular, he is remembered for his ingenious advocacy, a few years ago, of the treatment of certain chronic pelvic affections by forcibly breaking up adhesions.

James A. Milne, M. D., of Oswego, died on Tuesday, December 7th. He was graduated from the University of Michigan, Department of Medicine and Surgery, in 1865, and had acquired a reputation as an expert in insanity. He was retained as an expert in the famous Hoyt will case, and was also engaged in the Helmbold and other notable cases. In 1867 he was appointed physician to the American Board of Foreign Missions, and took up his residence in Alepho, Central Asia, where he was subsequently appointed vice-consul. His death was the result of an accident, his clothing having been caught by a pulley in his flour-mill.

George Robert Jacott, an esteemed proof-reader employed by the publishers of this journal, died on Friday of last week, in the sixty-ninth year of his age. Until within a few weeks of his death he continued his work on the journal, in the production of which it has always been recognized that his services were of the highest order. The wide range of his information, coupled with the courteousness and modesty with which he pointed out what he took to be errors, made him an ideal coadjutor in editorial work, and endeared him to those with whom he came in contact professionally. He was an amateur microscopist of no small attainments. Mr. Jacott was born in London, England, in May, 1818. He came to New York in 1842, and at the time of his death had been for nearly twenty years in the employ of the publishers of this journal. He was a bachelor and the last of his family. He lived with his sister for many years, until her death, which took place eight months before his own. He was buried on Sunday, the 5th inst., from Calvary Church, Brooklyn, of which he was a parishioner.

Letters to the Editor.

RAPID CURE OF CONGENITAL CLUB-FOOT WITHOUT THE USE OF THE KNIFE.

Lehigh, Iowa, *November 24, 1886.*

To the Editor of the New York Medical Journal:

Sir: On the morning of October 21st I was called to assist a midwife in a case of a primipara which had been prolonged for several hours, with the caput succedaneum protruding. The forceps was applied and the child extracted without any trouble. The child was a male of ordinary size whose right foot showed the most complete calcaneal variety of club-foot I ever saw. The dorsum of the foot, as far as the metatarsophalangeal articulations, was in contact with the anterior surface of the leg and could be partially straightened only with considerable force. The tibialis anticus, extensor proprius pollicis, and extensor longus digitorum, all were contracted and not so fully developed as the corresponding muscles of the other limb. I directed the nurse and mother to stretch the muscles and tendons, by moving the foot in a direction contrary to the displacement, every time they dressed the child, and to use considerable friction on the wasted muscles, telling them I would operate in a month or two.

On November 22d I called to see my little patient, and, to my surprise, found the diseased foot perfectly normal and the muscles of the two legs nearly equally developed. The mother told me that, in addition to carrying out my directions, she had kept the angle between the foot and the leg constantly filled with cotton wool for about three weeks, at the end of which time the trouble was so much better that she deemed it unnecessary.

Thinking this remarkably rapid cure may be of interest to your readers, I submit this brief description for their perusal.

Respectfully,

C. H. Churchill, M. D.

Proceedings of Societies.

NEW YORK PATHOLOGICAL SOCIETY.

Meeting of November 10, 1886.

The President, Dr. John A. Wyeth, in the Chair.

Fibroid Tumor of the Ovary.—Dr. H. Marion-Sims presented a double fibroid tumor of the left ovary, removed recently from a woman aged forty-eight years, the mother of two children, the youngest being sixteen years of age. About five years ago she began to suffer from severe pain in the back, bearing-down pains, and inability to walk or stand with comfort. Two years ago she noticed a lump in the right side of the abdomen, which grew, and with its growth the pain increased in severity, disabling the patient from standing. Dr. Sims removed the tumor in June last. There were but few adhesions. The tumor was removed without difficulty, and the patient recovered without an unfavorable symptom. The tumor was of about the size of an infant's head, and was interesting because fibroid tumors, or almost purely fibroid tumors, of the ovary were rare.

Two Aneurysms of the Heart.—Dr. Thatcher presented a heart the seat of two aneurysms, both of which communicated with the left ventricle by openings of nearly the size of a match. Apparently there had previously been adhesive pericarditis, and the aneurysmal cavities were formed by passage of the blood from the left ventricle between the adherent layers of the pericardium. One was of about the size of two fists, the other of about the size of a single fist. The heart-wall was very thick, except immediately about the two holes communicating with the aneurysms; here it was very thin, and the muscular structure seemed to be entirely wanting, leaving only a thin layer of fibrous tissue. The larger cavity was very nearly filled with laminated fibrin. The other had contained blood. The history of the case was incomplete. There had been eight abortions, but the patient denied venereal disease. Two years before her death she had an attack of rheumatism, and said she had not been able to work since. She seemed to have died of heart failure. There was some atheroma of the aorta. The other organs were not examined.

Congenital Cystic Degeneration of the Kidney.—Dr. L. Emmet Holt presented one kidney and multiple cysts, all that remained of the other, from the body of a child ten months old, dead of dysentery. During its last illness there was albumin to the amount of 8 per cent. in the urine; there were no casts. The urine was normal in quantity. The temperature for some days had ranged from 102° to 104° F. At the autopsy the right kidney was found much enlarged, weighing nearly two ounces. The left kidney was represented by a body of about the size of a pigeon's egg, which, to the unaided eye, contained no trace of renal structure, but consisted of one large cyst and a good many smaller ones, held together by loose connective tissue. The ureter was pervious to within about an inch of the kidney. The right ureter was large, but otherwise normal. The right kidney was the seat of acute parenchymatous degeneration.

Congenital Cyst of the Kidney.—Dr. Rogers presented a congenital multiple cyst occupying the place of the left kidney, found in the body of a child in the dissecting-room. The right kidney was normal. He expressed the opinion that the congenital form of cystic degeneration of the kidney was rare.

NEW YORK SURGICAL SOCIETY.

Meeting of November 8, 1886.

(*Concluded from page 643.*)

Tumor of the Bladder.—Dr. Lange showed a specimen removed from a man, fifty-three years old, who had had hæmorrhage after micturition for rather more than a year, for the most part slight, but sometimes abundant. Of late, small fleshy lumps of tissue had been discharged, with more or less inconvenience, but with subsequent improvement of the condition. Previous examinations of the bladder had been followed by severe feverish reaction. When the speaker first saw him, October 1st, he looked somewhat anæmic, but well nourished and not cachectic. He had just passed a fleshy mass of about the size of a small cherry, soft and very brittle, which, under the microscope, showed numerous disintegrated cells of rather large size. A smaller mass, brought out in the eye of the catheter, showed a distinct papillary structure with a regular lining of columnar epithelium, the origin of which it was difficult to trace. The presence of a tumor could not be made out, either by rectal palpation or with the sound. On the 11th suprapubic section was performed. The insertion of a bag containing about 250 c. cm. of water into the rectum, together with the injection of about 300 c. cm. of boric-acid solution into the bladder, previously washed out, failed to raise the latter organ noticeably above the pubes. An addition to the amount of rectal and vesical distension was of little avail in raising it. The peritonæum had to be stripped back, and it was found that the bladder was very flabby and apparently paretic. When it had been opened, the patient's pelvis was elevated, as recommended by Trendelenburg—a procedure which the speaker thought could not be too highly commended, for the bladder became distended as the vagina did in Sims's posture, and, with the light from above and an opening of sufficient size in the bladder, even its posterior wall was easily accessible. The tumor was found about 1 cm. behind the right ureter, covering an area of only about 2 cm. in diameter. It was flat, and its superficial layers were soft and yielded readily to the sharp spoon. It was thoroughly scraped, and then its base was removed, together with some apparently healthy tissue all around. The wound was sewed up with iodoformed catgut *sutures en étage.* The opening in the front wall of the bladder was likewise closed with catgut sutures, the mucous membrane not being included. The abdominal incision was left open at its lower part and loosely packed with iodoformed gauze. A Nélaton's catheter was left in the bladder. Not a drop of urine escaped through the abdominal wound, and in three weeks the patient was sent home. The catheter was repeatedly clogged with blood, especially about the fourth and fifth days, when some hæmorrhage took place from the bladder, but was easily checked with cold injections containing tincture of chloride of iron. The use of the rectal bag caused a rupture of the anterior wall of the rectum, but not involving the peritonæum. These bags, the speaker said (showing the one he had used), he thought ought to be of thinner and softer rubber and more elongated in shape. Thus far, he had closed the wound of the bladder with sutures in five cases of suprapubic section, four of them for stone. Primary union had taken place in all of them, and no urine had escaped through the abdominal wall, which he had generally left open. He had always used the interrupted suture of catgut, and thought dry iodoform catgut the safest material. A point of some importance was that the mucous membrane was not included, and that fine needles and thin thread were used, so that the swelling of the catgut would fill the suture-holes tightly and prevent the escape of urine. He had always applied the first and last sutures at points exactly corresponding to the upper and lower angles of the wound, or rather a little beyond, and tied them while slight traction was made on the edges of the wound in a direction parallel with it. The wall of the bladder would afterward become thinner, and so the closure of the wound would be very accurate. He left the catheter in place as long as it was well borne—if possible, six or eight days, giving an ample allowance of liquids and keeping the patient moderately under the influence of opium.

A microscopical examination of the specimen, by Dr. F. C. Heppenheimer, showed that the muscular tunic contained numerous blood-vessels with thickened walls, and that hæmorrhages had taken place into the tissue. Irregularly strewn between the muscle cells there was a great number of round cells, of the size of white blood-cells, thirty or forty being sometimes seen congregated around a blood-vessel. Toward the free surface they amounted to thousands, and lay close together, in some places attached to each other by fine connective tissue, like berries to a stem. They also contained capillary blood-vessels. In the middle of this small-round-cell sarcomatous mass bulbs of large-cell sarcoma were to be seen, but having no connection with the former. While in some places the large cells were completely mingled and interwoven with the small cells, the bulbs of only the large ones had distinct boundaries, and these were always surrounded by small-cell sarcoma. As the small cells far exceeded the large ones in number, the speaker would call the neoplasm a small-cell sarcoma. Thus far, he had not found either a small- or a large-round-cell sarcoma mentioned as having been found as a primary disease in the bladder, those described being all fibro-sarcomas. The scrapings consisted of the same cells, thoroughly mixed, but mostly of the large variety. They were not so densely congregated, but were separated by a myxomatous intercellular tissue, and bore every evidence of rapid growth.

Dr. Weir had distended the rectum and bladder after Peterson's method in a case in which, last May, he had done this operation, and exposed a tumor lying in the region of the left ureter, which was readily seized by its base and removed, after which the part was thoroughly scraped with Volkmann's spoon, nothing further being done. Microscopical examination of the tumor, which was as large as a hen's egg, showed that it was a sarcoma. The wound was left open and the patient placed on his side, with a drainage-tube left in the wound. Healing took place in six weeks, but the growth had since recurred. He would ask Dr. Lange if he had been much annoyed in his case with bleeding from the prevesical tissues, as had occurred in his case, although the handle of the scalpel had been used chiefly.

Dr. Lange replied that he had not, as, so far as possible, he had ligated even the smaller vessels carefully before dividing them.

Dr. Gerster said that he had witnessed Dr. Weir's operation, and had been astonished at the profuse hæmorrhage when the prevesical fat was divided. He thought Thompson's recommendation to tear the parts that contained large vessels was not a very good one, for it was more difficult to check hæmorrhage from a torn vein than from one that had been cut.

Dr. Weir remarked that Thompson stated that he pushed the vessels aside.

Dr. Gerster said that that was true, but that one was very apt to tear them in so doing. He much preferred Dr. Lange's method, as there was less hæmorrhage, and that was of advantage in examining the bladder.

Dr. Weir alluded to another risk of Peterson's method, that of splitting the rectum, and added that Pousson had shown that there was danger of rupturing the bladder also.

Dr. Wyeth stated that in one instance, where he had assisted in an ovariotomy, the bladder was pierced, and its floor was brought into full view, although there was no bag in the rectum. Urine escaped into the peritoneal cavity, which was washed out with a 1-to-20,000 corrosive-sublimate solution. The edges of the wound in the bladder were stitched to those of the abdominal wound, and healing took place in six weeks. He mentioned the case simply to show with what ease the floor of the bladder could be seen without using the rectal bag, and that extravasation of urine into the peritoneal cavity was not necessarily fatal.

Dr. Lange thought that the posture of the patient had much to do with the ease of examining the floor of the bladder.

Book Notices.

Spasm in Chronic Nerve Disease; being the Gulstonian Lectures delivered at the Royal College of Physicians of London, March, 1886. By Seymour J. Sharkey, M. A., M. B. Oxon., F. R. C. P., etc. London: J. & A. Churchill, 1886. Pp. 99.

Any scientific material, be it a collection of lectures, monographs, or what not, if it is considered of sufficient value to reprint in book-form, deserves an index, even if there are only ninety-nine pages of text. Its omission in the present case is probably as much the fault of the publishers as of the author.

The divisions of the work are (1) spasm in connection with cerebral motor mechanisms; (2) spasm in connection with spinal mechanisms; (3) functional spasm. The author, by his position as lecturer on pathology at St. Thomas's Hospital, is enabled to present ample material, both clinical and pathological, to illustrate his theme.

The cases include various lesions of the skull, cerebral cortex, and basal ganglia, pons Varolii, cerebellum, medulla oblongata, spinal cord, and spinal nerves, which gave rise to various spasmodic manifestations, tonic and clonic. Many of the histories have appeared before in print, but, rearranged with special reference to their relation to spasm, they form, with comments and deductions, an extremely interesting and instructive monograph.

Outlines of Lectures on Physiology, with an Introductory Chapter on General Biology. By T. Wesley Mills, M. A., M. D., L. R. C. P. Eng., Professor of Physiology, McGill University. Montreal: W. Drysdale & Co.

This little work is entirely different from any of the kind that we have seen. The author has had an extensive experience in imparting knowledge, which has stood him in good stead in writing for the student a book possessing noted merit without the defects of the usual compendiums and short cuts to knowledge. The opening chapter is on general biology, and that which follows it treats of the chemical constitution of the body. Then follow in order all the subjects relating to physiology. Professor Mills has been doing some original work on the circulation, and reference is made to this, with an account of the different demonstrations employed by the author in illustrating his lectures on the physiology of the circulation. We can heartily commend the book to students as containing the gist of one of the most elaborate and scientific courses on physiology given on this side of the Atlantic. Practitioners who wish to retain a clear and vivid view of the physiology they learned as students will also find the "Outlines" useful to glance over from time to time.

A Guide to the Examination of the Nose. With Remarks on the Diagnosis of the Nasal Cavities. By E. Cresswell Baber, M. B. Lond., Surgeon to the Brighton and Sussex Throat and Ear Dispensary. With Illustrations. New York: J. H. Vail & Co., 1886. 12mo, pp. 164.

An old subject, cleverly handled, well presented, and invested with much new and useful matter. The fact that the author was fortunate enough to secure for his manuscript the criticism of the highest rhinological authority in Europe, the distinguished Dr. Wilhelm Meyer, of Copenhagen, is a sufficient guarantee of its accuracy and excellence. We finish the book with a sense of disappointment that it should have been confined strictly to the limits of its title, and venture to express the hope that it is but the precursor of a more extended treatise. Of the illustrations, which are numerous, those by the author himself, representing various appearances of the nasal cavity seen by anterior rhinoscopy, are by far the best and most accurate yet published, and of themselves are enough to establish the success of the book, giving, as they do, a clear and comprehensive picture of the region which they represent. It is to be hoped that the idea may be adopted by rhinologists generally.

Lehrbuch der Physiologie für akademische Vorlesungen und zum Selbstudium. Begründet von Rud. Wagner, fortgeführt von Otto Funke, neu herausgegeben von Dr. A.

Gruenhagen, Professor der medizin. Physik an der Universität zu Konigsberg im Pr. Siebente, neu bearbeitete Auflage. Mit etwa Zweihundertundfünfzig in den Text eingedruckten Holzschnitten. Hamburg u. Leipzig: Leopold Voss, 1886. Zehnte Lieferung. Pp. 81 to 240, inclusive. Elfte Lieferung. Pp. 241 to 400, inclusive. Zwölfte Lieferung. Pp. 401 to 560, inclusive.

The present numbers nearly complete this excellent work, to which we have already referred in terms of commendation. The tenth number is devoted to the physiology of the brain and cranial nerves, the subject being completed in the eleventh, which also treats of muscular movements. The first forty pages of the twelfth complete the latter subject, being devoted to the functions of the larynx, while the remainder of the volume is on reproduction. There is no evidence in the concluding portion of the work that the author has varied from his original intention of exhausting each topic by presenting all the results of recent observations and experiments. The bibliography is exhaustive. The general student will deplore the absence of illustrations in a book the text of which is far from being light reading.

The Curability of Insanity: a Series of Studies. By Pliny Earle, A. M., M. D., late Superintendent of the State Lunatic Hospital at Northampton, Mass., etc. Philadelphia: J. B. Lippincott Company, 1887. Pp. 4–7 to 232. [Price, $2.]

Dr. Pliny Earle's book is not one that will especially interest the general physician; it is rather a work for asylum superintendents, statisticians, and alienists. Its purpose, and a laudable one by the way, is the correction of the loosely made statements regarding the curability of insanity. The author takes the view (and supports it) that insanity is on the increase, and advocates a tally rather of persons than of cases, for it has been the fashion to record as "cures" the temporary improvement leading to the discharge of individuals who have several times been returned to the same asylum for exacerbations in the course of a chronic insanity. Dr. Earle is concise, vigorous, and, despite criticism which occasionally approaches personality, just and independent.

A Laboratory Guide in Urinalysis and Toxicology. By R. A. Witthaus, A. M., M. D., Professor of Chemistry and Physics in the Medical Department of the University of the City of New York, etc. New York: William Wood & Co., 1886. Pp. 75.

This little work will no doubt prove of much use to those for whom it is intended—namely, students whose laboratory work is under the constant charge of an instructor who can complement the brief statements given in its pages. The directions laid down are concise and free from any ambiguity, and seem calculated to save much needless explanation and repetition on the teacher's part, which, in a laboratory where many students are taught, is a very valuable consideration, since it leaves time for more necessary instruction. The arrangement of the book, also, is a convenient one—the page opposite each printed one being left blank for notes.

BOOKS AND PAMPHLETS RECEIVED.

Transactions of the Texas State Medical Association. Eighteenth Annual Session, held in Dallas, April 27, 28, 29, and 30, 1886.

Éléments de pathologie chirurgicale générale. Par F. Terrier, professeur agrégé à la Faculté de médecine de Paris, chirurgien des hôpitaux, etc. Deuxième fascicule, Complications des lésions traumatiques. Lésions inflammatoires. Paris: Felix Alcan. 1887. Pp. 409 to 672. [Prix, 6 francs.]

Three Cases of Fracture of the Skull. By Oscar J. Coskery, M. D., Professor of Surgery in the College of Physicians and Surgeons, Baltimore. [Reprinted from the "Transactions of the Medical and Chirurgical Faculty of the State of Maryland."]

The Laws of Generation, Sexuality, and Conception. By H. M. Gourrier, M. D., of the Faculty of Paris, etc. Translated and edited by Franklin Duane Pierce, M. D., Superintendent of the Union Springs, N. Y., Sanitarium. Union Springs, N. Y.: Hygeia Publishing Co., 1886. Pp. 94.

Certain Hereditary and Psychical Phenomena in Inebriety. By T. D. Crothers, M. D., Hartford, Conn. [Reprinted from the "Alienist and Neurologist."]

Transactions of the American Dermatological Association at the Tenth Annual Meeting, held at Indian Harbor Hotel, Greenwich, Conn., on August 25, 26, and 27, 1886.

The Social Waste of a Great City. A Paper read before the American Association for the Advancement of Science, at the Annual Meeting in Buffalo, August 20, 1886. By Louis L. Seaman, M. D., LL. D., etc. [Reprinted from "Science."]

Antiseptics in Ovariotomy and Battey's Operation. Seventy Consecutive Cases, with Sixty-eight Recoveries and Two Deaths. By Robert Battey, M. D., Rome, Ga. [Reprinted from the "Transactions of the Medical Association of Georgia."]

Fifth Biennial Report of the Kansas State Insane Asylum at Topeka. For the Biennial Period ending June 30, 1886.

Rupture of both Membrana Tympani from a Fall on the Head. Escape of Blood followed by a Watery Discharge. Fracture of the Tympanic Portion of both Temporal Bones. By J. Morrison Ray, M. D., etc. [Reprinted from the "Archives of Otology."]

Transactions of the American Otological Society, Nineteenth Annual Meeting, Pequot House, New London, Conn., July 20, 1886. Vol. iii. Part 5.

The Vagus Nerve in the Domestic Cat (*Felis domestica*). By T. B. Stowell, A. M., Ph. D. [Read before the American Philosophical Society, July 15, 1881.]

The Trigeminus Nerve in the Domestic Cat (*Felis domestica*). By T. B. Stowell, Ph. D. [Read before the American Philosophical Society, May 21, 1886.]

La goutte; sa nature et son traitement. Par Dr. W. Ebstein, Professeur de médecine et directeur de la clinique médicale à l'Université de Goettingue. Traduction du Dr. E. Chambard, ancien interne des hôpitaux de Paris. Introduction du Professeur Charcot, Membre de l'Institut. Ouvrage orné de 12 chromolithographies. Paris: J. Rothschild, 1887. Pp. xii–3 to 194.

Reports on the Progress of Medicine.

OPHTHALMOLOGY.

By CHARLES STEDMAN BULL, M. D.

The Zonula and the Limiting Membrane of the Vitreous.—Schoen ("Arch. f. Ophthal.," xxxii, 2) decides from his investigations that the fibers of the zonule separate into two bands immediately behind the anterior ciliary processes. The thicker of these two bands runs over the ciliary processes to the anterior capsule of the lens, while the thinner band runs from the same point to the posterior capsule of the lens. The insertions on both anterior and posterior capsule maintain about the same direction, so that the points in which the individual fibers of the zonule spread out like a brush lie in one line. These lines of insertion form upon the anterior and posterior capsule a circle which lies about 0·8 mm. from the equator of the capsule. On the posterior capsule the circle coincides with the margin of the epithelium. The brush-like terminations stretch longitudinally over the anterior and posterior capsule and gradually blend with it. Besides the anterior and posterior zonule fibers, there is a third central group, which is very slender. Its line of insertion lies close behind the equator, between the insertions of the anterior and posterior zonule fibers, and the fibers are inserted in the capsule something like the roots of a tree in the earth. From these root-branches fine fibers are given off, which run over the capsule and gradually blend with it.

Specific Fevers and Diseases of the Eye.—J. Hutchinson, Jr. ("Ophth. Rev.," Sept., 1886), believes that the influence of specific fevers in causing intra-ocular disease is greater than has hitherto been supposed. He cites a case of pyæmia which was followed by iritis, and traces a causal relation between the two. The patient was a young man, aged sixteen, who had suffered a wound of the left wrist which suppurated. Subsequently he was delirious and had rigors and effusion into many of his joints, and from the right knee a large amount of purulent fluid was twice aspirated. He recovered very slowly and was not well till six months after the accident. Hutchinson saw him twenty months later, and found old adhesions of the iris in both eyes, with $V = \frac{20}{70}$. The attack of iritis had either occurred during his illness or shortly after. There was not the slightest evidence of either acquired or inherited syphilis in the patient. In investigating the relation between ocular changes and specific fevers, it must be remembered that a supposed attack of one of the latter may really have been secondary syphilis.

Iritis, Conjunctivitis, and Polyarthritis Gonorrhoica.—Rückert's communication ("Klin. Monatsbl. f. Augenheilk.," Sept., 1886) is of considerable interest. The patient was a man, aged twenty-nine, who in 1882 contracted a gonorrhœa, and soon after a slight inflammation of both eyes, and shortly after this an inflammation of the joints. Between 1882 and 1884 he had repeated attacks of inflammation of the eyes, but of what nature it was impossible to say. Some time in the year 1884 he again contracted gonorrhœa, and almost simultaneously arthritis of both knees. In November of the same year he had an attack of iritis in the right eye. On January 4, 1885, he contracted a third gonorrhœa, and six days later a purulent conjunctivitis of both eyes. The characteristic gonococci were *always* present more or less abundantly in the urethral secretion, but they were never found in the conjunctival secretion, though careful search was frequently made. Hence, Sattler and Rückert concluded that this was a case of gonorrhœal conjunctivitis without inoculation. Four days later, under proper treatment, the conjunctival inflammation had markedly subsided, but iritis now developed in the right eye, and six days later cyclitis set in, with exudation into both the aqueous and vitreous humors. The right shoulder then became inflamed, and this was soon followed by inflammation of the metacarpo-phalangeal articulation of the little finger of the right hand, which extended to the corresponding articulation of the fourth finger. On March 13, 1885, the patient returned with an irido-cyclitis of the left eye and a return of the urethral discharge without fresh infection. The irido-cyclitis subsided in about three weeks, and it was then decided to do an iridectomy upward in this eye as a prophylactic against a recurrence. Fourteen days later occurred a return of the gonorrhœal discharge and a simultaneous attack of irido-cyclitis in the left eye, with fibrinous exudation. This subsided, but six weeks later a fresh attack of iritis appeared in the left eye, accompanied on this occasion by slight arthritic attacks. From the middle of July till the middle of September he remained perfectly well, but he was then attacked by irido-cyclitis of both eyes, appearing first in the left eye. He recovered from both attacks, but from January to April, 1886, he was constantly suffering from either inflammation of the eyes, or of the joints, or of the urethra, and at times from all three. The salicylate of sodium did not act so well in the gonorrhœal rheumatic attacks as it usually does in typical true rheumatic arthritis.

Sympathetic Ophthalmia.—Gifford's observations and experimental results ("Arch. of Ophth.," xv, 3) differ materially from those of Deutschmann. He became convinced in the course of his experiments that a micro-organism capable of living in the lymph without exciting too intense an inflammation must of necessity be carried round from one eye to the other, and such an organism he found in the bacillus of anthrax or splenic fever. If the bacilli or spores have been introduced into the posterior part of the vitreous, within twelve to twenty-four hours a considerable exudation occurs, filling up the optic excavation or concealing the papilla entirely; there is also some conjunctival œdema near the inoculation wound. In the next forty-eight hours this exudation extends more or less into the vitreous, and begins to collect at the bottom of the chamber. The iris generally remains quite normal, but the conjunctival œdema increases to an enormous extent, the swollen membrane almost concealing the cornea. The microscopic examination shows all the vessels throughout the body more or less filled with bacilli; the subconjunctival and orbital tissue œdematous, with numerous leucocytes and masses of bacilli. An exudation composed of fibrin, leucocytes, and bacilli fills the optic excavation and extends into the vitreous. A similar exudation also frequently occurs at the bottom of the vitreous chamber, and at the periphery of the lens behind the zonula. Groups of bacilli almost constantly occur between the choroid and partially detached retina. The lymph-spaces of the central canal of the optic nerve are filled with bacilli, which can generally be followed with the vessels for a short distance into the orbit. Along the branches from the central vessels they can also be traced toward the choroid and the periphery of the nerve and for a short distance directly backward; this last especially at the point where the main vessels pass through the pia toward the orbit. In the sheaths of the nerve, except at the point of the pia just mentioned, in the space between them, in the cranial cavity, and in the second eye with its nerve and sheaths, there are no bacilli except those within the vessels. In Gifford's experiments no ophthalmoscopic abnormity was seen in the fellow-eye in any case; microscopically, also, the papillæ were perfectly normal. These experiments show that under the proper conditions micro-organisms can, in rabbits, be carried by the lymph-stream from the vitreous of one eye to the space around the choroid in the other, and that the path taken is just what the experiments with amorphous powders have indicated—*i. e.*, from the vitreous into the orbit, along the central vessels, thence outside the nerve to the cranial cavity, thence down between the optic sheaths. Just where the passage from the orbit to the cranium takes place can not yet be stated. With regard to the direction of the lymph-stream from the vitreous, we can provisionally assume that a condition so little likely to be modified by natural selection, and occurring in animals so widely separated as cats and rabbits, also exists in man. This also holds good of the stream in the inter-vaginal space. When, however, we come to the passage from the latter into the space around the choroid, we have, in spite of the great difference in the development of the lamina cribrosa in man and rabbits, in support of the probability that the physiological conditions are similar, the well-known fact that the supra-choroidal space can be injected from the inter-vaginal space with ease; the papilla and retinal on the contrary, with difficulty or not at all. The bacteria from an infected human eye are probably carried along through the orbit by the lymph-stream, and on reaching the cranial cavity are met by the current which sweeps down into the inter-vaginal and supra-choroidal spaces, their main damage being produced where they collect at the anterior part of the uveal tract. Under certain conditions the lymph-current is insufficient to guard against serious trouble, as is shown by the fatal cases occurring after orbital cellulitis, enucleation, and even suppurative iritis. As the fungi of infection are carried down from the cranium between the sheaths of the first as well as the second eye, the former is subjected to a double infection. In the cases where the first eye eventually remains the better of the two, it may be assumed that it has acquired a certain immunity from the primary infection, and that its cells offer a greater resistance to the micrococci from the cranial cavity than is offered by the virgin soil of the second eye. The fact that the anthrax bacilli pass from the inter-vaginal space into that around the choroid, and not into the nerve or papilla, coincides with the secondary importance of the sympathetic neuritis. The latter is not improbably due to the passage of diffusible irritating matter along the vessels connecting the choroid and the lamina cribrosa.

Xerosis of the Conjunctiva in Infants and Children.—Weeks (*ibid.*) has been making some examinations of the cheesy flakes found in the conjunctival *cul-de-sac* of a case of xerosis under his observation. These white masses were composed of pavement epithelium undergoing fatty degeneration, microbes, cell *débris*, free fat, fat-crystals, and a few pus-corpuscles. The fatty degeneration of the cells was very marked; in some the fat-globules were small and were arranged concentrically about the nuclei; in others the globules had coalesced. Four varieties of microbes were observed in the conjunctival secretion: cocci in groups quite numerous; streptococci (in chains); a short, thick bacillus, often double; and a large bacillus resembling the *Bacillus subtilis.* Pure cultivations of the microbes were made, with the result of obtaining the streptococcus, the *Staphylococcus pyogenes aureus*, the double bacillus described by Leber, and the common clubbed bacillus. Weeks concludes that xerosis epithelialis conjunctivæ occurs only in anæmic, poorly nourished individuals who have existed for some time on a poor quality of food, or whose vitality has been much reduced by disease. The entire absence of cerebral symptoms, and the fact that children and adults affected with this disease may recover, renders the supposition of its dependence on encephalitis untenable. The observations and experiments recorded in Leber's paper Weeks thinks are not sufficient to demonstrate the parasitic origin of xerosis.

The Action of Myotics on the Accommodation.—Lang's and Barrett's investigations upon the effects of eserine and pilocarpine upon the eye ("Roy. Lond. Ophth. Hosp. Rep.," xi, 2) have been very thorough. In their investigations with eserine they used an aqueous solution of the sulphate, 0·5 or 1 per cent. in strength, and they summarize the average of these results as follows: 1. An approximation of the far point, which began at the 7·33 minute, reached its maximum in 15·67 minutes, and disappeared in 48·67 minutes. The maximum approximation was equivalent to 5·85 D. 2. An approximation of the near point, which began in 4·33 minutes, reached its maximum in 26·17 minutes, and disappeared in less than 9 hours. The maximum approximation was equivalent to 9·15 D. 3. A contraction of the pupil, which began in 9·83 minutes, reached its maximum in 20·83 minutes, and disappeared in 24 or 48 hours. 4. An increase in the range of accommodation, which began in 6·5 minutes, reached its maximum in 52·67 minutes, and disappeared in 8 to 9 hours. The maximum increase was equivalent to 6·89 D., whilst the average normal range was 8·95 D.—that is, the proportion of the increase to the normal range was 0·77 D. In explaining the changes in the range of accommodation produced by eserine, the first question to be answered is, What effect does eserine produce on the intra-ocular tension, and what effect could any tension-alteration have on the corneal curve? The authors conclude that the alteration of the corneal radius, which von Reuss has described with such minuteness and care, is neither a constant nor a necessary accompaniment to the change in the range of accommodation; and that the influence which the cornea exerts in the approximation of the far or the near point, if it constantly exists, is very trivial. In regard to the question whether the change in the range of accommodation is due to an alteration in the position of the lens, the authors think that a forward movement of the lens may be produced by eserine, and this may contribute slightly to the alteration in the position of the far and near points. They think that the contraction of the sphincter of the iris has no appreciable influence on the accommodative changes produced by eserine. The change in position of the far and near points which eserine produces, and the consequent alteration in the range of accommodation, must be referred chiefly, if not entirely, to changes produced by the eserine in the ciliary muscle itself, since neither the changes in the iris nor the cornea, nor an alteration in the position of the lens, could produce more than a fractional part of the change. In presbyopes the far point is not approximated so greatly, and the near point is approximated to about the same absolute extent as in the young—that is, to a greater relative extent. In their experiments with pilocarpine they always used a 1-per-cent. solution, and used it profusely in the eyes, and summarize the results as follows: 1. An approximation of the far point occurred, which began at the 15th minute, reached its maximum at the 26·67 minute, and disappeared in 60·83 minutes. The maximum approximation was equivalent to 2·7 D. 2. An approximation of the near point was produced, which began in 13·33 minutes, reached its maximum in 28·33 minutes, and returned in 70 minutes. The maximum approximation was equivalent to 3·51 D. 3. A contraction of the pupil began at the 13·75 minute, reached its maximum at the 22·5 minute, and disappeared within 48 hours. 4. An increase in the range of accommodation began in 11·25 minutes, and reached its maximum in 60·9 minutes. The maximum increase was equivalent to 2·72 D., whilst the average normal range was 7·84 D.—that is, the proportion of the increase to the normal range was 0·36 D.

The Origin and Development of Myopia.—Stilling ("Ber. d. 18ter Versamml. d. ophth. Ges.," 1886) reviews his former opinions as to the origin of myopia. He at first assumed that myopia was essentially a development under muscular pressure during the period of development, and stopped when the latter ceased. Later he, together with the anatomist Pfitzner, made fifty autopsies with special reference to the course and origin of the superior oblique, and the influence of the latter on compression and tension, on the shape of the globe and papilla, and on the relations of the sheath of the optic nerve. He discovered that there were essentially two types of union of the sheath with the eyeball. In one it is as thick as the sclera, in the other it is much thinner than the sclera, and the spaces in its tissue much larger. He discovered that, when the papilla was not circular, its shape depended upon the direction in which the contracting force of the superior oblique muscle acted. He found, also, that the sheath of the optic nerve was weaker in cases in which there was any pulling on the optic nerve than in those in which there was none. He regards the ordinary accommodative myopia as a symptom of development under pressure. Under the pressure of the superior oblique during the period of development the eye increases in length, and such an eye is not a diseased eye, but merely a slightly deformed eye. Highly myopic eyes are diseased eyes not because they are myopic, but they are myopic because they are diseased. He assumes, therefore, two forms of myopia—one depends on near work, and consists in a slight deformity; the other is a real and serious disease of the eye, a hydrophthalmus.

The Nature and Treatment of Myopia.—Knies (*ibid.*) reserves the name of myopia for that condition in which there is a pathological elongation of the longitudinal axis of the eyeball. When the myopia is unilateral, it is often possible to distinguish a veritable neuritis, and this is the more marked the younger the patient. The next fact observed is the development of a crescent on the temporal side of the disc, accompanied by an atrophy of the pigment, and followed by a drawing of the choroid over the nasal margin of the disc. He regards the myopic process as a diffuse choroiditis, and the changes in the optic nerve and retina as secondary. In the progressive stage the deeper layers of the choroid and the inner layers of the sclera are filled with round cells, in consequence of which the sclera weakens and yields. After the progressive period has stopped, there appears a kind of cicatricial tissue in the choroid. The course of a typical myopia is never continuous; the condition of the optic nerve is a good measure of the course of the process in the choroid. The most important ætiological factor is to be found in continuous close work of the eyes during the period of puberty, and here the most important thing to consider is the enforced hyperæmia of the choroid. He employs both eserine and pilocarpine in the progressive stage, and he thinks with effect.

Choked Disc.—Ulrich (*ibid.*) reports three cases of choked disc, in all of which the ophthalmoscopic examination was made at the beginning of the trouble, and the patients all died while the ocular symptoms were at their height, and in all autopsies were made. He does not agree with Parinaud in the views held by the latter in regard to papillary œdema being simply symptomatic of cerebral œdema. He thinks it is an hæmatogenous stasis-œdema occurring in the disc itself. The cause of the venous hyperæmia he seeks in the intra-neural compression of the central vessels by the dropsical tissue of the trunk of the optic nerve; and the proof of this compression is found in the fissure-like shape of the lumen of the vessels in cross-sections of the nerve-trunk. This peculiarity, he states, is met with only in choked disc.

A New Demonstrating Ophthalmoscope.—Priestley Smith has devised a new demonstrating ophthalmoscope ("Ophth. Rev.," September, 1886), which consists of a horizontal bar supported at each end by two diverging legs. At one end of this horizontal bar is a chin-support for the patient; at the other end is a perforated glass mirror, capable of steady adjustment to any position. A transverse arm near the mirror carries a candle, provided with a light metallic screen on either side of it; one of these hides the candle from the patient, the other hides it from the observer, and enables him at any moment to cut off the light from the mirror, and thus protect the patient's eye from unnecessary illumination without disturbing the adjustment of the instrument. A wire, placed in the pillar of the mirror and movable to either side, carries a piece of white paper which serves as a fixation-point for the patient's eye. At the middle point of the horizontal bar is a jointed support carrying a light rod, one end of which is held by the observer, while the other end holds the lens. By means of this rod the observer can place the lens in any desired position in relation to the patient's eye.

Anæsthesia of the Retina.—Parinaud's paper ("Ann. d'oculistique," July–August, 1886) is a somewhat difficult one to abstract. He begins by stating that the initial and often only symptom of retinal anæsthesia is a reduction in the sensibility for light, which makes it necessary that the light should be from ten to one hundred times as intense before it is perceived. This anæsthesia for light is compatible with a normal sensibility for color, but, nevertheless, is frequently complicated by dyschromatopsia. It is also compatible within certain limits with a normal visual acuity. There is never any hemeralopia, no matter how considerable the anæsthesia for light may be. Another remarkable fact is, that, in spite of the reduction of the luminous sensibility, there is almost always photophobia present. The anæsthesia for light begins at the periphery of the visual field, where it is always more marked than in any other part of the field. With a narrowing of the visual field there is often present a notable reduction of the luminous perception at the center of vision. When the macula is invaded, the amaurosis becomes complete. When the anæsthesia for light has attained a certain degree, it produces a modification of the color-sense in the same manner as does cataract. This false dyschromatopsia must not be confounded with the new, which results from the lesion of a special function and has peculiar characteristic symptoms. In true dyschromatopsia the fault or defect of perception is not proportional to the degree of anæsthesia for light, and the different colors are not equally involved. In exploring the visual field, the first characteristic symptom of dyschromatopsia is the transposition of the circles of blue and red; the field for blue, which is normally wider than that of red, becomes narrower. The persistence of vision for red is the dominant characteristic of this form of dyschromatopsia. In the tabetic or alcoholic dyschromatopsia the central scotoma is grafted sometimes on the concentric amblyopia, and the two processes develop simultaneously. Another peculiarity sometimes met with when the anæsthesia for light and the narrowing of the visual field for white prevail, is that the field for red is sometimes wider than that for white. The visual acuity is very variously involved in retinal anæsthesia, though this form of amblyopia rarely interferes with the perception of forms. But when the central anæsthesia for light passes a certain limit, the visual acuity falls rapidly. Diplopia or uniocular polyopia very frequently accompanies anæsthesia of the retina, but is not generally recognized because concealed by the amblyopia. Retinal anæsthesia is not marked by any ophthalmoscopic lesion. It begins unnoticed, is sometimes transient, but returns, and afterward is more often marked by a fixedness of character which is remarkable for a functional trouble which is so rarely allied to an organic lesion. Spasm of accommodation is not infrequent in retinal anæsthesia, but spasms or paralyses of other muscles of the eye are very rare. When the latter occur they are *associated paralyses*, affecting the same movement in the two eyes. Retinal anæsthesia always depends upon an affection of the nerve-centers. The pathogenetic conditions of this amblyopia are those where the sensibility is affected as a whole, particularly in the form of hemianæsthesia. Hysteria is the most frequent cause of hemianæsthesia and of the amblyopia which accompanies it, and indeed retinal anæsthesia has been called hysterical amblyopia. Charcot has shown, however, that it may be caused by a lesion of the posterior part of the internal capsule, and probably of the opposite cerebral hemisphere.

A Family of Four Children affected with Retinitis Pigmentosa.—The special interest of this group of cases reported by Cant ("Ophth. Rev.," Sept., 1886) lies in the fact that the usual ætiological relations of the disease were absent. There was no consanguineous marriage, and no history of the disease in the family. The father was an epileptic, sometimes having as many as two or three fits in a day. The family consisted of four children, and all were affected, the disease gradually increasing from the youngest, aged five, whose fundus oculi was dotted with minute points of pigment at the periphery, to the eldest, aged fifteen, in whom the pigment was in much larger quantity, and extended nearly to the macula. The blood-vessels in all were small and the discs white. The children were all hypermetropic from $\frac{1}{40}$ to $\frac{1}{12}$, and in the two older boys there was convergent squint in the right eye. Vision varied from $\frac{5}{50}$ to $\frac{5}{18}$. The field of vision was narrowed in all. They all had difficulty in finding their way in the evening, and all saw badly by artificial light. The color sense was normal.

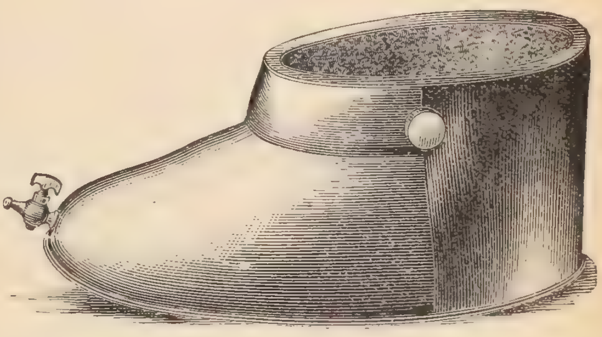
Peripheral Chorio-retinitis associated with peculiar Pigmentation of the Mucous Membranes.—J. Hutchinson, Jr., reports the following interesting case ("Roy. Lond. Ophth. Hosp. Rep.," xi, 2): The patient was a woman, aged sixty-seven, whose left eye showed evidences of old neuro-retinitis, an incomplete ring of pigmentary deposits in the periphery of the retina, atrophy of the choroidal pigment, very marked dark-brown and black patches in the mouth, on the lips and palate, and a general superficial glossitis. There was no tendency to eye disease in the family, and her parents were not related by birth. The ocular changes were not symmetrical, the right eye being practically unaffected, and the patient was sure that vision in the left eye had failed about seven years previously and suddenly. Night blindness and limitation of the field were not present. The tongue presented conclusive evidence of syphilis. Scattered over the dorsum of the tongue were superficial white scars. There were also a few scars on the lips, but the peculiar feature here was the presence of a number of brownish-black patches, generally about 5 mm. in diameter. They were also found inside the cheeks, on the hard palate, and on the gums. There was no xanthelasma of the eyelids. The woman had borne seven children, four of whom had died at the ages of one, three, eight, and thirteen years, respectively. There were no evidences of inherited syphilis in any of them, nor of any affection of the eyes.

(*To be concluded.*)

New Inventions, etc.

AN IMPROVED FOOT-WARMER.

The accompanying cut represents a new and convenient apparatus for the application of heat to the feet and ankles. It is, as will be seen, shoe-shaped and of a size sufficient to admit the foot, which comes in contact with the velvet-lined zinc inner wall of the shoe. The outer wall being of copper, a galvanic current is produced when the interspace is filled with hot water. The advantages of this apparatus over the usual methods employed for the application of heat to the lower extremities is too obvious to require special mention. The foot-warmer is for sale by Mr. W. F. Ford, of Caswell, Hazard, & Co., New York.



Miscellany.

The New York Academy of Medicine.—The Section in Materia Medica and Therapeutics will meet on Wednesday evening, the 15th inst., when Dr. Frederick A. Burrall will read a paper on "The Treatment of Bright's Disease."

At the meeting of the Section in Orthopædic Surgery, on Friday evening, the 17th inst., Dr. Thomas L. Stedman will read a paper on "The Influence of Maternal Impressions in the Production of Congenital Deformities."

The New York Post-graduate Medical School and Hospital.—Mrs. John Sherwood will give a reading on Tuesday, December 14th, at 3 o'clock P. M., at the residence of Dr. William A. Hammond, 43 West Fifty-fourth Street, for the benefit of the baby's ward of the New York Post-graduate Medical School and Hospital. Tickets, at $2 each, may be obtained of any member of the Faculty of the school or at the office of this journal.

The New York Skin and Cancer Hospital.—We are asked to inform our readers that the hospital, at No. 243 East Thirty-fourth Street, New York, and its country branch, at Fordham, Westchester County, have been for some time, and are now, ready for the admission of patients from this and other States. Applications may be directed to the secretary of the medical board, L. D. Bulkley, M. D., 4 East Thirty-seventh Street.

The Pennsylvania School of Anatomy and Surgery.—Dr. A. H. P. Leuf, late of Brooklyn, has been appointed demonstrator of anatomy.

The Health of the State of Michigan.—It appears by the report of Dr. Henry B. Baker, the secretary of the State Board of Health, that during the four weeks ending November 27th diphtheria was reported from sixty-three places, scarlet fever from forty-two, typhoid fever from thirty-five, measles from eleven, and small-pox from one.

Anthropological Notes.—An esteemed correspondent sends us the following abstract of the proceedings of recent meetings of the *Société d'anthropologie de Paris:* At the meeting of June 3d, M. L. Maneuvrier presented several crania showing a variety of Wormian bones not found described in works on anatomy. He had noticed these small bones, completely independent of sutures, beneath the surface of the normal bones. They existed ordinarily at the outer part of the base of the frontal bone, but were seen elsewhere also. Their dimensions varied from one cm. to less than one mm. in diameter; their form resembled that of the usual supernumerary bones found in the sutures. Of fifty-eight crania of Parisians, fifteen presented these isolated endofrontal bones, and they were seen in twelve out of thirty-seven negro crania.

At the meeting of June 17th, M. J. Deniker presented a thesis for the *doctorat ès sciences de la Faculté de Paris*, entitled "Recherches anatomiques et embryologiques sur les singes anthropoïdes; fœtus de gorille et de gibbon comparés aux fœtus humains et aux anthropoïdes jeunes et adultes," embodying myological researches said to do away with Bischoff's last objection against Huxley's position.

At the meeting of May 6th, M. J. Loris-Mélikoff presented a note on a tailed woman. The case had been observed by Dr. A. W. Eliséeff, and an account had been communicated to the *Société des medicins russes de Saint-Pétersbourg*. That gentleman had been called to the patient on account of her being prevented from walking and sitting by pain in the region of the sacrum. On examination, he found a hairy tail, 45 mm. in length and about 36 mm. wide at the base. The patient's mother had no such appendage, but the grandmother had a larger one than the patient's, and the peculiarity, noticed only in the female line, had been a family secret for several generations. The tail developed between the ages of twelve and seventeen years. M. Eliséeff expressed the opinion that women presented a phase of bodily development more advanced than that of men, and that tailed men were less common than tailed women.

A Bath Attendant as a Diagnostician.—A lady suffering with urticaria was advised by her physician to take a Turkish bath, for which purpose she went to a well-known bath-house in this city. The attendant, assuming a knowledge that she did not possess, declined to give the bath on the ground that the disease was erysipelas and not urticaria, and it was only by persistence that the lady was enabled to carry out her physician's directions.

The "Neurological Review."—The editor, J. S. Jewell, of Chicago, has issued the following circular: "The editor of the 'Review' recognizes clearly the necessity of an explanation to his subscribers for the non-appearance of the 'Review.' He now proceeds, by their leave, to make it: First, the misplacement of some portions, and total disappearance (by means unknown) of portions of others, of the two earlier numbers that are yet due. Second, the ill health of the editor that has prevented him from doing the necessary work. Third, the halting, at last, with a view of determining a policy for the coming year, which it appeared by a little delay could be satisfactorily settled. A large triple number will appear in a few days, and a double number before the end of the year. In these such announcements will be made for the coming year as the editor hopes will be favorably received by his subscribers."

"Practice" is the title of a new monthly journal, edited by Dr. J. F. Winn, and published in Richmond, Va. The first number, containing twenty-four pages of reading matter, gives original communications, abstracts from current literature, book notices, and editorials.

Laryngology at the College of Physicians and Surgeons.—Dr. Lefferts's tenth and eleventh lectures, on the 14th and 21st inst., at 2 o'clock P. M., will be on the subject of laryngeal phthisis, and will be illustrated with laryngoscopic demonstrations, colored blackboard drawings, and pathological specimens.

Polymorphism of the Comma Bacillus.—At the Congress at Strassburg Herr von Sehlen (Hannover) spoke at length on the polymorphism of the comma bacillus of Koch. Koch had already asserted that the cholera bacillus might, in the course of its evolution, pass through different forms—the comma form, that of the letter S, the spiral, and certain coiled filamentous forms. Cultivations made with cholera dejecta, obtained at Naples, contained, besides the comma bacillus, a large number of small, very short rectilinear rods, as well as spherical corpuscles, resembling micrococci. At first it was supposed that bacteria foreign to cholera were accidentally present in the cultivations, but these rods and micrococci cultivated on gelatin produced pure comma bacilli, presenting the same characteristics as those observed in the cultivations of the adult comma bacillus. Herr von Sehlen agrees with most other competent students that the morphology of bacteria is not sufficient to determine the species.—*British Medical Journal.*

THERAPEUTICAL NOTES.

Ether in the Treatment of Phtheiriasis Pubis.—The efficiency of chloroform in destroying the pediculi pubis is well known. Dr. G. P. Thomas, of Alameda, Cal., has sent us an interesting account of a case in which, after the failure of the familiar applications, he used ether with success, one thorough application being found sufficient. He thinks the use of ether preferable to that of chloroform, from the fact that it is less irritating to the skin.

Piscidia Erythrina as a Uterine Sedative.—Dr. Lessona ("Gazz. delle cliniche"; "Ctrlbl. f. Gynäk.") reports a hundred and six cases in which tincture of *Piscidia erythrina* was given, to the amount of from 75 to 225 minims within an hour or an hour and a half, on account of after-pains or threatened abortion. Favorable effects were produced in seventy-one per cent. of the cases.

Galvanism in the Treatment of Chronic Ulceration of the Tongue.—Dr. Meyer ("Berl. klin. Woch."; "Memorabil.") gives an account of the case of a woman who had a painful ulcer of the tongue, dating back to a time when she had bitten her tongue, nine years before, while suffering with severe labor-pains. It had resisted treatment, and for several years it had been so sensitive that she had been obliged to live almost wholly on liquid food. One hundred and ninety applications of the constant galvanic current, extending over a period of a year and a half, the positive electrode being applied to the tongue, cured it.

An Application for Painful Dental Caries.—A contributor to the "Union médicale" gives the following formula:

Dry alcoholic extract of opium	1 part;
Camphor	1 "
Peruvian balsam	1 "
Mastic	2 parts;
Chloroform	20 "

A pellet of cotton soaked in the solution is to be introduced into the cavity.

THE NEW YORK MEDICAL JOURNAL, December 18, 1886.

Original Communications.

CASES OF LARYNGEAL ŒDEMA.*

By THOMAS AMORY DE BLOIS, M. D.,
BOSTON.

The fact that during the past winter several instances of death from asphyxia due to laryngeal œdema have been published in the medical press is my only excuse for bringing before you these few cases of an affection upon which so much has already been written.

I think the subject has been divided by all writers into, first, a class of cases which apparently originate in the larynx, and are not coincident with other disease; second, those cases of œdema which appear to be propagated from some inflammatory process going on in other parts of the mucous tract; and, third, those which form sequelæ, or occur in the course of some other affection, such as syphilis, tuberculosis, the exanthemata, etc.

The first variety, or "acute laryngeal œdema"—called also acute laryngitis—is undoubtedly of very rare occurrence, for in almost every case there will be found some pharyngeal inflammation. But while I report some cases which occurred in patients at the time suffering from syphilis or phthisis, yet I purposely omit several cases I have had of chronic œdema occurring during those diseases. My cases were all acute so far as their course went, and, if I had not known that the patients had syphilis or tubercle, I should have considered the œdema as belonging to the first variety, so little did they differ from this type.

As œdema of the larynx occurs sometimes, but not often, in the course of syphilis and tuberculosis, it certainly can not rightly be considered as forming part of the course of these diseases, and should rather be classed as an accidental complication of them.

The pathology of laryngeal œdema is certainly far from being well understood, for, should it be possible in most cases to obtain autopsies, minute examination would be next to impossible, for the specimen would have parted with its water to a large extent before a section could be made; and hardening in alcohol would offer no advantage, for, on account of the different densities, the same loss would take place from endosmosis.

Taking the pathology in general, then, there is a transudation from the blood-vessels into the network of the submucous tissues, which so tightly hold the imprisoned serum that, as Bayle has expressed it, it can not be squeezed out. This does not, however, prevent the œdema from gradually emptying through the small punctures made in scarifying.

To what, then, is this transudation due? Perhaps, as Charazac says, to inflammation; perhaps to arrested return circulation; or may it not be a vaso-motor change not dependent upon either? It does not seem probable that either inflammation or obstruction could produce œdema with the startling rapidity which is sometimes seen.

In one of my cases I made an examination and did not observe the œdema, but only the very severe laryngitis. But, after detaining the patient to await the arrival of the admitting physician of the hospital (perhaps for half an hour), and on making a second examination, the commencing œdema was so marked as to call for local treatment.

Case I.—On July 17, 1880, I saw my first case of œdema at the Boston Dispensary, in a man of thirty-five without previous history of constitutional disease. The effusion affected one aryepiglottic fold, was very recent, and yielded promptly to local applications of astringents, and blisters to the neck.

Case II was seen on August 26, 1880, in a man of fifty-two, who had slight œdema of both aryepiglottic folds. I believe the case was tuberculous, but the treatment was about as in the first dispensary case.

Case III.—February 4, 1881, at the Boston Dispensary, a man of twenty-four, with œdema of the epiglottis. Folds greatly inflamed, but not œdematous. I treated this case with topical applications of solution of nitrate of silver. Recovery followed in a few days.

Case IV.—April 21, 1881, at the Boston Dispensary, a woman of thirty-nine. The case complicated a small retropharyngeal abscess, to which it probably owed its origin, and after evacuation the œdema subsided.

Case V.—June 30, 1882. In a dispensary case there was œdema complicating laryngeal phthisis. The œdema was never great enough to threaten life, and subsided during the local treatment of the larynx.

Case VI.—September 21, 1882, at dispensary, woman aged forty. Acute œdema involving one aryepiglottic fold. No history of previous disease. Scarified with concealed lancet. Recovery in twenty-four hours.

Case VII.—November 20, 1882, at the Boston Dispensary, a man aged thirty-five. Acute œdema of epiglottis and aryepiglottic folds, not threatening life. History of exposure to cold. Subsided in two days after free scarification.

Case VIII.—September 27, 1883, at Boston City Hospital, woman of twenty-three, having had laryngeal tuberculosis for five months, developed œdema of the aryepiglottic folds, which subsided under general and local treatment without scarification.

Case IX.—At the dispensary, November 13, 1883, a man aged thirty-six—in fact, the same patient as in Case VII—who had this second attack at exactly the same time (to within a week) as the year before. The œdema, however, was greater, but again subsided in about a day by prompt scarification. This case corresponds to one reported by Dr. Cambette, in which the affection returned every winter for several successive winters.

Case X.—In private practice, October 2, 1883, Miss E. W., aged about twenty, came to my office at 7 a. m., having on the previous 28th of September consulted me for pharyngitis. She gave a history of having on the night of the 1st remained out in the air at a seaside resort up to a late hour. She complained of sharp pains, like the pricking of pins, in the throat; the voice was very hoarse; there was a good deal of dyspnœa; she was restless and anxious. Unfortunately, my concealed lancet was at the instrument-maker's, and I had nothing else that I could use; so, leaving the patient in the office inhaling the vapor of boiling water, I drove to the instrument-maker's and returned with a lancet, with which I freely scarified the epiglottis and folds, which were greatly œdematous, white, and glistening; the hæmorrhage was profuse, and I drove with the patient to her home and scarified again that evening, although the patient had been somewhat relieved by the previous operation. The following morning there was no evidence whatever of the œdema.

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* Read before the American Laryngological Association at its eighth annual congress.

CASE XI.—At the City Hospital, July 10, 1884, a man, aged thirty-two, had had acute laryngitis for three days, at the end of which time he appeared at the hospital with œdema involving the epiglottis and aryepiglottic folds; there was some dyspnœa. The œdema subsided in forty-eight hours after the use of the lancet.

CASE XII.—Mr. N. M., a patient of Dr. Fifield's, of Dorchester, whom I saw with him in consultation, October 12, 1885, and who gave me the following history: The gentleman had recovered from diphtheria, and had subsequently developed an acute follicular amygdalitis, and during the past few hours had had considerable dyspnœa. The doctor had made several visits to the house during the preceding day. On examination, I found a strong, robust man of about thirty-five, who was greatly prostrated and who breathed with effort; he was weak and nervous and in a profuse perspiration. He had double follicular amygdalitis, with some œdema of the uvula, and it was necessary to scarify the tonsils, etc., before the jaws could be separated sufficiently to obtain a view of the larynx, which, when seen, showed œdema of the epiglottis and folds, and this extended well down into the larynx. After many unsuccessful attempts, I at last succeeded in introducing the concealed lancet into the throat and thoroughly scarified the œdematous parts. There was considerable hæmorrhage, but the patient expressed great relief, and the dyspnœa was certainly lessened. Blisters were applied to the throat, and I agreed to see the patient in consultation the next morning. Dr. Fifield could not believe that he would not be called during the night, and so made every preparation to perform tracheotomy at short notice; but when we saw the patient in the morning there was not a vestige to be found of the œdema, and the amygdalitis was much better. In a few days the patient was out at his business.

CASE XIII was a case in private practice. T. E., a man, aged thirty, had had syphilis, but when he consulted me he had no evidence of the disease. He consulted me on the afternoon of the 5th of January, 1886, and at that time had some pharyngitis and an acute laryngitis following exposure to cold. I made applications of astringents to the larynx and prescribed for him, which directions, however, were not fully carried out. The next morning he again consulted me, and was at the time suffering great pain in the throat at every inspiration—as he expressed it, "sharp, darting pains." On examination, there was marked œdema of the epiglottis and one aryepiglottic fold. I scarified the œdematous parts, the patient being very much terrified, and he fainted immediately afterward. I sent him to the City Hospital, where he was put into a room with steam, and arrangements were made to do tracheotomy as soon as required. I saw the patient the next day, the œdema having by that time involved the other fold, so that the image was that of the typical three bladders, pinkish-white and glistening. There was considerable dyspnœa. I again freely incised the parts. The hæmorrhage was so great as to be troublesome. The following day the larynx was very slightly œdematous. The patient remained in the hospital and was treated for laryngitis, but had no return of the œdema.

CASE XIV.—P. C. was a male patient, aged twenty-six, whom I had treated the year before at the City Hospital for the throat complications of syphilis. At that time he had ulceration and loss of the uvula, with partial adhesion of the palate to the pharyngeal wall. The fact that it did not entirely adhere was, I think, due to the efforts of the patient himself, who daily passed an oiled probang behind the velum. On the 30th of January, 1886, this young man came under my care for syphilitic pharyngitis; but the ulcers, although deep, healed without difficulty. On the 13th of March he appeared with an acute laryngitis, and also œdema of the epiglottis and folds, and some dyspnœa; these parts were scarified and the patient was taken into the house, where, with the help of steam and large doses of iodide of potassium, he made a good recovery and was discharged on the 23d of March.

These fourteen are the only cases of laryngeal œdema that I have ever seen. They represent the exponents of this disease in four thousand throat cases which I have treated myself in both private and hospital practice; they cover a period of six years, and were carefully collected from the records of the two institutions mentioned and from my own case-book. Occurring, as they did, among different classes of people at different times of the year and in different institutions, it seems to me that these cases form a very fair standard of the frequency of the affection, at least in this part of the world—or, in other words, one in every three hundred throat cases.

The two hundred and forty-five, then, that Sestier reports would represent over seventy thousand throat patients at the same ratio. Œdema would appear to be more prevalent abroad than here.

To my fourteen cases I should like to add two which have been reported—one in the "New York Medical Journal" and the other in the "Boston Medical and Surgical Journal"—during the past year.

The first of these occurred in the service of my former student, Dr. O. A. Gordon, at the time house surgeon at St. Mary's Hospital, Brooklyn, and I give the history in his own words:

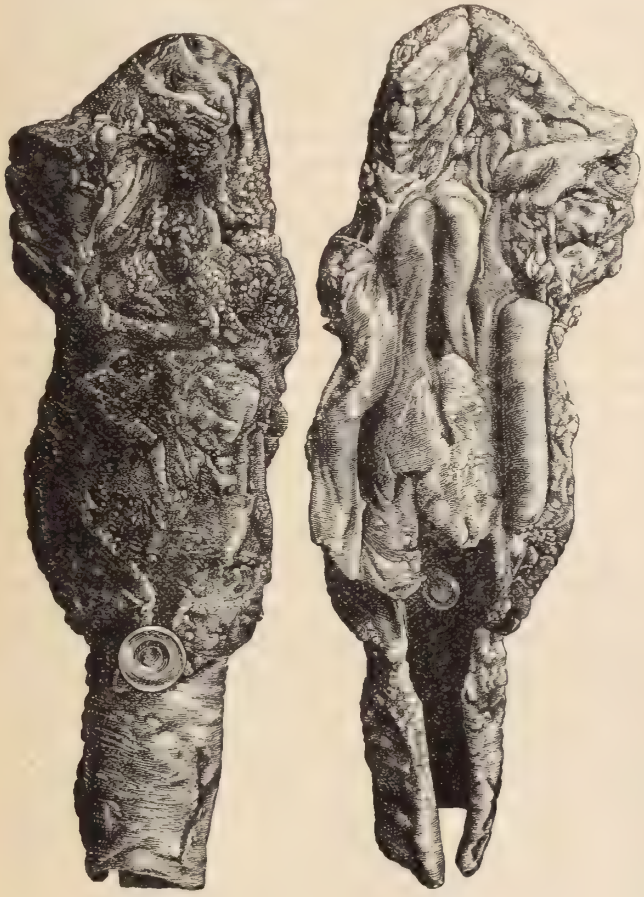
"DEAR DOCTOR: I am very sorry that I am not able to give you a better history of the case in question, but you are welcome to it, such as it is. I presented it at the Brooklyn Pathological Society, and was not aware that it was published. There was no microscopic examination, and the pathologist's notes are very brief. I find the following notes in my history-book:

"Thomas T., aged fifty, single, born in Ireland, laborer, well nourished, was admitted September 2, 1885. The patient presented himself for admission this afternoon about six o'clock; says he has had a sore throat for about one week, and has difficulty in swallowing. He is quite hoarse and unable to open his mouth more than an inch, making an examination of the larynx impossible. There is quite a marked enlargement in the right submaxillary region (not fluctuating). Pulse normal, and but slight rise in temperature. He was sent to the ward, and the enlargement painted with iodine and a mild gargle ordered. At about 8 P. M. (on the same day) the house surgeon was notified that the patient was choking. On arriving in the ward he was found to be gasping for breath and very cyanotic. About one minute was spent in trying to relieve him by milder means, when laryngo-tracheotomy was performed and a tube inserted. The time from the attack to the completion of the operation was not more than four minutes, but he did not make any attempt at respiration after the tube was inserted. Artificial respiration was kept up for several minutes, but availed nothing.

"*Autopsy.*—Brain œdematous, markedly emphysematous lungs. The right side of the heart distended with venous blood. An abscess of about the size of a walnut in the right tonsillar region; marked œdema of all the submucous tissue above the vocal cords (including the epiglottis). The aryepiglottic folds and adjacent tissue were swollen, forming a tumor on either side which nearly closed the rima glottidis.

"You will see that the patient was only in the hospital about two hours, and that no diagnosis had been made, as it was about dark when he came in. He was able to walk to the hospital, and I thought it was nothing more than a submaxillary abscess forming, and that there was nothing urgent in the case. I was passing through the ward about half an hour before I was called, and he was up and conversing with other patients. I advised him to go to bed, and told him I would see him in the morning. The case is of interest as showing the danger a patient is in with œdema of the larynx, and the importance of an early diagnosis. I have no doubt that the patient's life would have been saved had tracheotomy or scarification been resorted to half an hour earlier, but you will understand from the history why a diagnosis was not made.

"I inclose some photographs which were taken the second day after the specimen was removed. The œdema at that time had fully one half subsided.



Anterior. Posterior.

"Before the patient's death, when I entered the ward he was on his feet, with tongue protruding, and very black in the face. I tried to pass my finger into his mouth, but was unable to. Yours very truly,

"O. A. Gordon, M. D."

The second of these cases occurred in the practice of Dr. R. T. Edes, of Boston, who writes me as follows:

"Dear Doctor: You are very welcome to make any use of this case you please. I am sorry the notes are not more minute, but think that they tell the essential points, except those which might have been determined by the laryngoscope. . . . I think it possible that there may have been a spasmodic element in the case. He was an impatient and excitable man, and it seems to me that it is not improbable that when he felt a slight obstruction he undertook to overcome it by violent efforts, and thus rendered it worse. I am yours very truly,

"R. T. Edes.

"G. R., a robust and muscular man, with, however, rather a pale complexion, aged thirty-five. On Tuesday, December 29th, was exposed to cold wind, upon which he remarked. Wednesday, a chill in the morning, but went to business, from which he returned soon with a sore throat. He was seen by me about 4 p. m. He could not speak aloud, and had great difficulty in swallowing.

"The fauces were uniformly red, but not much swollen, and the tonsils not enlarged. No external swelling. He said he had been a little nauseated. Prescribed ice to swallow, citrate of magnesium, Tully's powder, etc. Thursday he had not slept; he wrote instead of speaking, and said he could not swallow, and made some vain attempts in my presence. The throat looked about as the day before; he said otherwise he was all right; was hungry, and would be glad to eat if he could. Temperature 101°, pulse 120. At this time there was no complaint of dyspnœa, and no appearance of it. No cyanosis, no exaggerated muscular efforts or constrained position. About 11 a. m. he wrote a note. About 12, after swallowing a very little ice-cream, jumped out of bed, said or wrote that he was choking, and made 'a horrible noise' (evidently that of forced and obstructed respiration). A considerable amount of mucus was withdrawn from the fauces, and he died in a few minutes. At the time of my visit there was possibly noticeable a very slight stridor, but barely perceptible."

"110 Boylston Street, *May 23, 1886.*

"Dear Dr. De Blois: I inclose a report of the points of interest in the case of Mr. R. (Dr. Edes's case), and also say a few words in regard to what, in my opinion, is the form of œdema in this case. Sincerely,

"W. W. Gannett."

"*December 31, 1885, 7 P. M.* G. R., vol. iv, p. 206.

"The autopsy was made seven hours after death. The body that of a large, well-developed, and well-nourished man. Rigor mortis present. Bluish tint to lips. The blood in general was fluid. The glottis was of especial interest, the epiglottis being markedly thickened. The aryepiglottic folds, vocal cords, and tissues of the larynx were markedly increased in thickness, and of a boggy feel. On section of these parts, the connective tissue was found to be thickened, and to present a gelatinous appearance and a moist surface, yielding a thin, clear fluid on pressure. The mucosa of the glottis, trachea, and larger bronchi had been so modified by the preservative used (about a tablespoonful having been poured into the mouth by the undertaker before he could be stopped) that no conclusions could be drawn as to the condition of the mucosa at the time of death.

"The spleen and kidneys were dark in color from venous engorgement; other organs not remarkable. Death evidently resulted from suffocation, as shown by the fluid condition of the blood and the venous engorgement of spleen and kidneys. As to the form of the œdema in this case, it is evidently of the inflammatory variety, hydræmic and obstructive causes being readily thrown out, the individual having been in perfect health until within a day or two of death. Moreover, the autopsy showed no general or local cause for obstructive œdema. There was probably a catarrhal inflammation of the larynx, and the œdema was secondary to this. As stated above, the use of a preserving fluid had made it impossible to state what the condition of the mucosa was."

The exhaustive monograph by Dr. Charazac, "Étude sur l'œdème du larynx," has so recently appeared that many references on the subject would be hardly desirable, but these few points might be noticed: Massei and Semon have each reported a case in which the œdema involved the vocal cords alone. I think in no other cases have they been known to be affected.

Charazac found twenty-one cases of primary acute laryngitis with œdema, the duration of which was from one to eight days. Of the twenty-one patients, eight died, and the cure of the others was effected with and without tracheotomy, so that, since the time of Sestier, who believed the disease fatal in the majority of cases, the prognosis has certainly improved.

Charazac advises against scarification in secondary cases, and in chronic cases advises counter-irritation.

Schiffers applied chromic acid (1 to 10) with good results in reducing the œdema.

The use of catheters in the larynx has been advised by Héring, McEven, and Szeparowicz.

So far as my own experience in treatment goes, out of my fourteen patients six recovered under treatment by astringents, eight under scarification. Possibly, had this procedure not been carried out, one or two of the cases might have proved fatal. That scarifying secured the favorable results is not, of course, proved, but it seems as if it might be well to try it before performing tracheotomy, as it is possible that the necessity for it might not continue, and, if the œdema persisted, tracheotomy could always follow as a secondary operation.

RAYNAUD'S DISEASE.*

By J. C. SHAW, M. D.,

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The condition to which I invite your attention is one of considerable interest, and only within recent years has the attention of physicians been directed to it.

For the purpose of elucidating the clinical history of this condition, I shall give briefly the histories and description of some cases. The marked features in these cases are the localized blanching of the fingers or toes, nose, or ears, and in some cases localized gangrene of these parts:

Case I (Personal).—A woman, aged fifty, admitted to the asylum with melancholia, delusions of poisoning, etc., attempts at injury to herself, refusal of food, and resistance to every effort made to do anything for her. One morning when visiting her I picked up her hand to examine her pulse, and was surprised to find the index and middle fingers, up to the joint of the second phalanx, extremely pallid and death-like. When felt, they were intensely cold. This condition of pallor lasted some time, then passed away, and I never observed it again in the patient. It was impossible to learn if this condition had ever occurred before to her.

Case II (Personal).—M. S., aged fifty-one, seen first December 12, 1882, having been sent to my clinic for nervous diseases, in the Brooklyn Eye and Ear Hospital, by Dr. Alexander Clark. Patient is of spare build, but healthy-looking. Has enjoyed good health in former years. Eight months ago began to have some trouble with right shoulder; could not move it as well as formerly, and, when she did move it to any great extent, it pained her. About this time she began to notice that the little and ring fingers of the left hand would suddenly become cold and white, lasting about half an hour, and then pass away. At first she had these attacks about once a week; at present she has them every day.

While being examined she had an attack. The entire little finger, and the next finger up to the joint of the second phalanx, became suddenly intensely pale and death-like; they were cold to the touch, and the patient said they felt cold. This pallor lasted about half an hour; it was followed by a feeling of warmth, and, as the patient said, one could almost see the blood as it returned to the fingers; they grew red and warm.

Case III (Dr. T. A. McBride, in a paper before the New York Neurological Society, April 1, 1878; partially reported in New York "Medical Record," April 11, 1878).—Man, aged thirty-two, of neurotic constitution. Certain parts of the index and middle fingers of both hands, also of end of ring finger of right hand, at irregular intervals and at varying periods, became cold, of a dead-white paleness, numb, and stiff, with some loss of sensibility, and were moderately painful. These symptoms were replaced by a dusky, often purplish-red color of the same parts, accompanied by a sensation as of having been stung by nettles, and soon after the affected portion of the fingers regained their normal appearance. The phenomena appeared to occur independently, occurring when the patient was otherwise healthy as well as when sick. No similar phenomena had been observed elsewhere in the body.

Case IV (Dr. Barlow, "Clinical Society Transactions," April 27, 1883).—In October, 1882, there appeared in the out-patient room a little girl aged five. Within a short time the whole of right foot and ankle, and the leg for a distance of three or four inches upward, had become cold and of a nearly uniform grayish-blue color. The child whimpered a little with pain in the foot, and did not like it to be handled much. Just below both elbows, on the dorsal surface of the forearm, there was an area of perhaps three inches in length, of ill-defined blueness and coldness. This slight blue area was more marked on the right than on the left side. The child had no cardiac disease. It was admitted into the hospital ward of Dr. Fox, and this condition passed off in an hour or two, and the next day the child seemed perfectly well.

The second day after, at 3.30 p. m., while sitting in the ward, she had another attack, which Dr. Barlow saw. There was slight blueness and coldness in the left foot and ankle. The child whimpered a little, but was able to walk across the ward with a slight limp; the foot became natural again within less than half an hour, and she had no further trouble. From a history obtained subsequently, it was learned that she was nursed nearly two years, was late in teething, and was probably rickety to some extent. She had not suffered from any of the acute specific diseases, and there had been nothing special in her history until February, 1881, when she was about three years and a half old. It was very cold weather, and the child was out of doors, but carried in somebody's arms. When brought into the house she complained of cold feet, and vomited some watery stuff. Her feet were quite blue, and the blueness extended for a short distance above the ankles. The blueness lasted from five o'clock until midnight. Next day she was all right. Seven months passed before she had another attack, and this was in the month of September. The blueness lasted two hours. She had another attack in a week's time, and several other attacks during the winter. Since that time the attacks have always been confined to the cold weather. The attacks occur mostly in the afternoons; never at night. The duration of the longest attack has been seven hours; but usually the attacks pass off in less than an hour. Latterly the elbows have been affected, but the ears and nose never have been.

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* Read before the Brooklyn Pathological Society, April 22, 1886.

Case V (Dr. Barlow, "Clinical Society Transactions," 1883).—A girl, aged five, of healthy parentage, had been nursed twelve months, and, with the exception of what was called "congestion of the brain from teething" at sixteen months, had been a healthy child. She had had whooping-cough and measles when one year old; never had ague. In September, 1881, being then three years and a half old, she had her first attack of coldness and blueness, with pain affecting one foot, and lasting for several hours. Very soon after this attack commenced, the child passed some very dark urine. She had another similar attack in a few days, and then repeated attacks during the winter until April, 1882. There were sometimes two or three during the week; the duration was not generally more than three hours. The attacks occurred most commonly at midday; the pain always preceded the coldness and blueness. The child did not pass dark urine with every attack, and never more than once with each attack. During the first winter, along with these symptoms, she complained on some occasions of pain in her stomach, and in one attack the left hand became blue and cold up to the wrists. The last attack of the first winter was on May 6th. She was then free until September, 1882. Dr. Barlow saw her in February, 1883. Up to that time she had sometimes gone fourteen days without an attack, and at other times she had had two in a day.

March 15th.—For about eight days she has had an attack daily in left foot, but on some days in both.

Case VI (Dr. T. C. Fox, "Clinical Society Transactions," 1885).—Mrs. S., aged forty-one; family history good; no evidence of any neurosis; never had rheumatism or any special illness; married at twenty-seven, and had six children, including twins at last confinement; no miscarriages. Dates her illness from June, ten years ago, when she moved into a damp house. Her fingers then began to grow at frequent intervals white and dead, all of them simultaneously on both hands, "like wax," as she expressed it, and they pained her excessively. Gradually her feet also became involved, and up to the present time the recurrences have been getting more frequent. She is now a woman of spare habit, and with an anxious face and intensely nervous temperament. She sleeps poorly, and has had two attacks of hysteria. Heart and other organs healthy. There is no diabetes. When seen in February the condition of the fingers might easily have been mistaken for scleroderma; all of the fingers were icy cold, of a slightly blue tinge, fusiform in shape, the skin over them shining and sunken; the nails were variously affected, and some of the bones atrophied. The history, however, made the nature of the malady clear. On subsequent occasions I have seen all the fingers slightly swollen and of various shades of lividity up to the metacarpo-phalangeal joints. Occasionally the asphyxiated condition of one of the fingers will lead to the formation of a blood-blister; the contents subsequently become puriform, and, on the rupture of the bullæ, an ulcerated surface is left, which is very slow to heal. At the time of writing, the left ring finger is ulcerated at the end and under the nail. In the toes the disease is less severely felt, but their ends are somewhat blue and cold. The tip of the nose is rather blue. The influence of cold is very marked. Her ears and nose grow blue and cold directly she goes out of doors; her hands and feet get intensely livid, with an "agony of pain." She also states that her extremities grow blue "in a second" if she is startled by a sudden knock at the door or any unusual occurrence, and her heart "feels as if in a vise."

Her pulse is thready and compressible. There has been no hæmoglobinuria, and her blood appears to be normal.

Case VII (Dr. T. C. Fox).—Man, aged fifty-one, of regular life. He was a stout, florid-complexioned man of remarkably good physique, but yellow conjunctiva; complained of feeling weak. He applied to Dr. Fox on account of two oval, symmetrical, gangrenous sores, of about the size of a half-crown, one at the junction of the middle and lower thirds of each shin. These sores were covered with an adherent black eschar, and they had originated suddenly in blood-blisters. There were also a few pustules scattered around. His feet and hands were cold and his pulse was soft and weak, but, with one exception, Dr. Fox could find no other diseased condition. He was suffering from marked diabetes, but was not aware of it. The sores were very obstinate to heal, and on March 28th another congestive patch appeared on right shin, which seemed to threaten gangrene. On January 2, 1884, he again applied to Dr. Fox, who says he did not recognize that the man was suffering from Raynaud's disease until January 5th, when his left great toe became suddenly black and swollen and intensely painful. Inquiry now developed the fact that for years he had suffered from sudden blanching and numbness of the digits. He had formerly been a door-porter in a store, and exposed to draughts.

Case VIII (Dr. Charles K. Mills, "American Journal of the Med. Sciences," 1878, p. 431).—E. J., aged thirty-two, single, mill-hand. Mother died of phthisis; well until nineteen years old, except always suffering from excessive sweating of hands and feet. At nineteen she took a severe cold, from which she suffered several weeks. One morning in the early autumn, on her way to work, the little finger of her left hand, as far as the second joint, suddenly became cold, white, and numb. After this, whenever exposed to cold, one or more fingers would present this appearance. Dr. Mills found a mitral presystolic murmur; the lungs showed impaired percussion resonance and vesicular murmur, and there was a cavity of considerable size in the right apex. Six months after her first attack her little finger was first affected. A swelling formed at the point of the thumb as if a splinter were in it; it suppurated and a small abscess formed, and was a long time in healing; from time to time thereafter small abscesses formed on ends of fingers.

Case IX (Personal).—M. D., aged forty, an insane woman, confined in the Kings County Insane Asylum. Patient has always been of a disagreeable, fault-finding disposition, and of a very low order of intelligence, which her physiognomy also indicates. She has a paternal aunt insane. Patient has had delusions of poisoning, with consequent refusal of food; made many attempts at suicide; has often been violent, owing to her delusions of persecution. In August, 1883, she became quite agitated and remained in this condition many months, talking in a loud voice, attacking all who came near her; in constant motion; never sat down. In September it was observed that she had a small gangrenous spot on the end of the middle finger of the left hand; she resisted when an attempt was made to look at it, but was held; it was then found that she had complete gangrene of the end of that finger, and each finger on that hand had, on each side of the nail, a small black gangrenous spot. The gangrene of the first phalanx of the middle finger in the next week extended so as to involve the entire phalanx; it was black, and evidently quite dead and sloughing. The small spots on the other fingers had grown a little larger. It was now found that the right hand had also begun to have the same small black spots on every finger on each side of the nail; the gangrenous spots on this hand were not larger than the head of a large pin. Her feet were examined, but no similar condition was found, although they were very much swollen. Her urine showed nothing abnormal. Her heart could not be examined, as she had to be held and fought constantly when approached, but the record shows that, on her admission, her heart was normal. In the course of several weeks the black spots on the right hand disappeared without ulceration, but on the left hand the middle finger ulcerated and sloughing took place.

At the present time the finger is not yet well; the ulcerated surface is still not healed; she will not allow any dressing to remain on it.

Case X (Dr. Southey, "Clinical Soc. Trans.," 1883).—F. N., aged nine, a large-headed, fair-complexioned, light-haired child. He enjoyed good health until the autumn of 1881, when he was attacked with some feverish illness, attended by pain in his limbs, which was believed to be rheumatism. On admission, he was greatly emaciated, and his hair was falling off in large quantities. He was in a very nervous and excitable condition, crying whenever an attempt was made to examine him, singing snatches of songs and hymns in a loud tone; by day he slept a good deal, but as evening approached he became very noisy, singing and screaming alternately. He used to pull handfuls of hair off his head. Appetite bad; tongue clean and moist; pulse, 148; no cardiac murmur, no physical signs of lung disease; urine presented no abnormality. The single noticeable fact observed was the localized gangrene of the tip of his right index finger and the coldness of his extremities. The gangrene of the right forefinger crept slowly and steadily onward, and, in a few days, involved the entire terminal phalanx. On December 2d the thumb and second finger of the right hand were observed to be red, swollen, throbbing, and hot, just like chilblains, and there was a small purple patch upon the helix of his left ear, evidently a blood stasis. On December 4th this patch was still apparent, although smaller, but the third finger was assailed like the thumb, fore, and second fingers, and all four looked extremely livid and red, while redness and swelling of the thumb of the left hand were also present. On December 5th a spot exactly similar to that upon his ear of local blood stasis, threatening gangrene, appeared upon the extreme tip of his nose, and the tip of the right middle finger became quite black. During the ten days that the boy had been under observation his temperature was found in the morning, before 10 a. m., to be usually normal or only slightly elevated, 99·4°; in the afternoons and evenings it rose to from 101° to 102·8°.

On December 19th the tips of all the fingers of his right hand were gangrenous, and the flesh of the fingers below the gangrened ends was livid and swollen.

On the left hand, the thumb, index, and little fingers were extremely dusky.

In the course of the ensuing week the gangrene made rapid progress, spreading from the tips of all the fingers of the right hand backward and centripetally. On December 29th there were troublesome cough, broncho-pneumonic sputum, and tubular breathing over the lungs posteriorly. In the first week of January his general condition was improved; lines of demarkation between dead and living tissue were defined. Suppuration commenced. The cough improved, and he began to gain a little flesh.

On January 9th the urine was found to be acid, 1·012 specific gravity, and containing both blood-cells and albumin. It attracted attention by its dark color.

For several subsequent days it was natural-colored and of specific gravity varying between 1·010 and 1·025. He presented a true intermittent hæmaturia, provoked apparently by impressions of external cold on the surface of his body. Thus, after exposure and being washed, he would pass a specimen of urine containing blood, whereas urine passed a few hours later contained a mere trace or none.

During the latter part of January, February, and March, blood was more often absent than present in the urine, and this only very temporarily.

Throughout January suppuration and separation of the gangrened digits was taking place.

His temperature ranged between 97·4° and 101·4°; it always rose in the afternoon and sank in the morning. At the beginning of August he was able to walk about again.

Most of these patients presented an evident abnormal irritability of the nervous system, if not positive nervous disorder.

Dr. McBride's patient had anterior spinal paralysis, from which he recovered.

One of Dr. Barlow's patients was said to have had "congestion of the brain from teething."

One of Dr. Fox's patients eventually became a nervous hysterical woman.

Dr. Southey's patient was evidently hydrocephalic, and probably insane, when under his observation.

One of Dr. Fox's patients had diabetes with an evident neuropathic constitution to begin with. My three cases presented a neuropathic history. The exciting causes of the disease appear to be exposure to cold, most of the cases being very much worse in the cold weather.

Emotional disturbances, fright, etc., appear also to be excitants.

Many of the cases are associated with intermittent hæmaturia, which is probably due to the same causes as the gangrene and "dead fingers."

Some of the cases are also associated with diabetes.

The symmetrical distribution of the gangrene, and also of the blanched fingers, is remarkable, and was especially insisted upon by Raynaud.

Although a large number of the cases are symmetrical, especially those leading to gangrene, many are reported in which only one extremity is involved. This symmetry in the attack is seen even in cases in which the ears are the seat of the gangrene.

According to McBride, the development of dry gangrene from digiti mortui is rare.

According to Raynaud, the condition usually preceded what he called local asphyxia, which might be acute or chronic. If acute, it might go on without any disturbance of nutrition, but more commonly gangrene, more or less localized, occurred, and sloughs of considerable size might form, or, what seemed more common, after a small amount of gangrene had occurred, the local asphyxia disappeared and cicatrization followed.

In the chronic form, lasting some months, there might be localized gangrene followed by cicatrization, as in the acute, but more commonly there were manifested other alterations in the nutrition of the parts, so that the skin became much thickened and indurated.

Dr. Colcott Fox thinks that the changes left after this disease may lead to its being confounded with scleroderma. It can, however, only be so confounded if a previous history is not obtained. Dr. Fox also remarks that in two unquestionable cases of scleroderma under his observation, in which the hands were involved, both women had long been subject to "dead fingers," and one of them continued to have mild attacks of asphyxia of the fingers after the onset of scleroderma.

It appears also that Vidal thinks there is an intimate connection between scleroderma and Raynaud's disease, and Brochin points out that the two diseases can be united in the same patient.

Dr. Allan McLane Hamilton, in an article on this subject, sums up by saying that it is characterized by—

1. Local blanching, lasting two or three weeks, or coming on in intervals of several weeks and lasting a few hours each time.
2. Sensation and motion unimpaired.
3. Temperature of affected members lowered.
4. Parts affected—hands.

Subsequently reported cases, however, have shown that we may have slightly elevated temperature as well as lowered, and the hands, feet, ears, nose, and even the body, may be the seat of these disorders.

A marked characteristic of these symmetrical gangrenes of the extremities is the complete absence of all causes of obstruction in the arteries. How, then, is this interruption to the flow of blood into the parts to be explained? Raynaud thinks that it is the result of a spasm of the small blood-vessels under the influence of an irritation to the vaso-motors of these vessels, and usually through a reflex act.

Raynaud thought that, in women who were the subjects of this disease, the pelvic organs might be the starting-point of the irritation, which was reflected upon the vaso-motors of one or more of the extremities, for some cases of localized asphyxia were observed at the time of menstruation. Many cases, however, appear to have had their primary seat of irritation in the extremities themselves—such cases as were produced by cold, for instance.

It appears probable that, whenever the vascular disorders are symmetrical or wide-spread, the monarchical vaso-motor center in the medulla oblongata may be involved, and one might be inclined to think that in these cases occurring in association with diabetes, this monarchical vaso-motor center was involved, and thus caused the localized spasms at the extremities, etc.

Dr. T. A. McBride also explains the condition as being due to reflex vaso-motor spasm. Vulpian does not fully accept Raynaud's view as to menstruation producing the starting-point from which reflexly the vaso-motors of an extremity are affected; he does not think this necessary to explain these cases, for he says at the menstrual period, in many persons, the nervous system is already often in a state of over-excitability; the least impression on the skin is apt to give rise to phenomena out of all proportion to the excitation.

More recently Raynaud has expressed the view that in these cases there is an exaggeration of the excito-motor power of the central parts of the spinal cord presiding over the vascular innervation.

Dr. Hamilton also looked upon this condition as due to over-irritation of local sympathetic vaso-motor filaments.

One who has the occasion to watch the approach of the blanching of the fingers in one of these cases at once adopts the view of its being due to vaso-motor spasm.

I have been asked to point out the treatment to be adopted in such cases. I must do so in the most general manner possible; it has been various, almost every writer adopting a different plan.

Galvanism, locally, also to the spine, has been quite generally used. Raynaud first advised it. Bromide of potassium, tonics in general, Fowler's solution, potassium iodide, quinine, morphine, internally, when the patient has suffered pain, and the local application of chloroform, have also been used for the same purpose; light bandaging of the part has also appeared to relieve this pain. In cases complicated with diabetes, scleroderma, etc., the treatment indicated is such as is carried out in those conditions.

Other than those cases of Dr. Allan McLane Hamilton, Dr. T. A. McBride, and Dr. C. K. Mills, a case has been reported by Dr. S. C. Clark, of Clayton, N. Y. ("Med. Record," 1885, vol. i, p. 122).

Dr. C. L. Dana, in an article on "Acro-Neurosis," reports two cases ("Med. Record," 1885, vol. ii, p. 57). Dr. Dana, at the end of his article, gives an extended bibliography, and to that I refer those interested for cases other than those mentioned in this brief essay.

A CONTRIBUTION TO THE

CLIMATOLOGICAL STUDY OF CONSUMPTION IN PENNSYLVANIA.

By WILLIAM PEPPER, M. D., LL. D.,
PHILADELPHIA.

(Concluded from page 652.)

Lancaster County.—Seven replies. One refers to consumption as very rare; two say it is rare; two, rather rare; one, prevalent to a limited extent; one, rather frequent. All excepting one (Manheim) describe their towns as exposed. The land is rich; the people are occupied in farming, are thrifty, and largely of German descent. Easterly winds are uniformly recognized as most troublesome to consumptive patients. Rheumatism prevails and malaria is not infrequent, excepting, of course, in Paradise, where the reporter not only states that consumption is rare, but denies the prevalence of rheumatism, pneumonia, Bright's disease, and says there is no malaria.

No. 1. Ephrata; population, 1,500. Situated on the north side of Ephrata Mountain, 384 feet above tide. In eleven years' practice the reporter found no cases of acquired phthisis, and states that the few inherited cases he has met with have moved there from other places. Rheumatism and neuralgia prevail owing to change of temperature.

No. 2. Bird-in-Hand; population, 350; elevation, 359 feet. The air is cool and damp, and there are occasional fogs; there is a liability to sudden changes of temperature. Phthisis is more common among Americans and runs an acute course. Half of the cases are hereditary, and the reporter believes the disease to be contagious. There are no houses, and there is no portion of the town, where the disease especially prevails.

Nos. 3, 4, and 5. Bainbridge; population, 669; elevation, 271 feet. The streets are well shaded; the atmosphere is spoken of as warm and dry, and few fogs occur. No unusual changes of temperature are spoken of by any of the observers. One says that all the cases are hereditary; the second that 80 per cent. are so; the third says that half are hereditary; all agree that the disease is chronic, and do not believe that it is infectious.

No. 6. Manheim; population, 2,000; elevation, 402 feet. Town sheltered and warm. It has been necessary to cut down trees for health. There are some ponds and marshes. Phthisis is both acute and chronic. It is hereditary and sometimes contagious; the reporter has strong evidence of this.

Malaria prevails to a limited extent, as well as rheumatism and pneumonia. Bright's disease occasional.

No. 7. Paradise; population, 110; elevation, 359 feet. Fogs occur occasionally. The town is not liable to sudden changes of temperature. The reporter does not believe the disease can be prevented in children hereditarily predisposed. He has treated but two patients in seven years—one, aged five years; the other, aged six years and a half. Both were females living within half a mile of each other at the base of a mountain. Neither family was strumous.

Lawrence County.—No report.

Lebanon County.—One reply. Lebanon; elevation, 466 feet. Sheltered. South and east winds prevail. The air is cool and dry. Fogs do not occur often. There is shade in the streets, and trees should be removed. Limestone. The soil is very rich. East winds are troublesome to consumptives. There are great atmospheric changes. The people are engaged in factories; they are of American descent and German. Consumption is prevalent. There are houses in which consumption has been especially frequent. They are damp, but hereditary influence is present. There are private sewers with drainage into underground fissures. Consumption is generally chronic, and is hereditary in one half the cases. Malaria is not prevalent to any degree, and has no relation to phthisis. Rheumatism and pneumonia are prevalent. Bright's disease is not.

Mercer County.—Two replies. In neither place is malaria, rheumatism, pneumonia, or Bright's disease prevalent.

No. 1. Sharpsville; population, 1,819; elevation, 948 feet. The town is exposed and cold. North and east winds prevail. The atmosphere is damp. Fogs occur. The soil is good, being largely alluvial. Sandstone. South winds trouble consumptives. The people are employed in iron manufacturing, among whom are German and Irish. Consumption is said not to be very prevalent, and pursues a chronic course. It is hereditary in about half the cases. The reporter thinks that children hereditarily predisposed can be rescued from phthisis by removal to a dry and equable climate of high elevation.

No. 2. Sharon; population, 7,000; elevation, 950 to 1,150 feet. It is sheltered in a deep valley and warm. North and west winds prevail. The atmosphere is cool and damp. Fogs seldom occur. Few streets shaded. The country is hilly. Northerly winds are the most troublesome to consumptives. The town is liable to extreme changes of temperature. The people, mostly Irish with some Germans and fewer Americans, are engaged in the iron industry. Consumption is rare; when it does occur it is chronic. The disease is generally hereditary, but occasionally acquired. One patient from Sharon has been cured by going to Colorado. Malaria is very prevalent; it is thought to act as a preventive rather than as a cause. Neither rheumatism, pneumonia, nor Bright's disease can be said to be prevalent.

Mercer, the county-seat, having in 1870 a population of a little more than one fourth that of Sharon, furnished about *the same* number of fatal cases of phthisis. It is said to be a well-known fact in the county that consumption is more prevalent in Mercer than in Sharon. The town is fourteen miles east of Sharon, situated on the top of a hill 450 feet above Sharon. The wind sweeps the town. The population of the former is largely native American; Sharon, largely foreign. The reporter (Dr. E. Griswold) inclines to the opinion that the general use of bituminous coal as a fuel and for manufacturing purposes secures a certain degree of immunity from phthisis.

Monroe County.—No report.

Montgomery County.—Three replies. No. 1. Merion Square; population, 500; elevation, 600 feet. The town is exposed and cold. North and west winds prevail. The atmosphere is cool and dry. East winds are the most troublesome to consumptive patients. There are sudden changes of temperature. The people are of American descent for several generations, and there are many Irish; they engage in farming chiefly. Consumption is seldom met with; it assumes a chronic course. Seventy-five per cent of the cases are reckoned as hereditary. Reporter does not believe in contagion. No prevalence of malaria, rheumatism, pneumonia, or Bright's disease.

As to a house especially associated with phthisis, and notes as to preventive treatment, see Dr. H. A. Arnold's letter.

No. 2. Bryn Mawr. There is a large "floating" population. It is a fashionable resort ten miles from Philadelphia. Elevation at railroad station 416 feet above the sea. The place may be said to be moderately cold and exposed. The prevailing winds are southerly in summer and from the northwest in winter. East winds disturb those subject to phthisis. There are no fogs. The air is cool and dry. The country is hilly. The soil is dry and of micaceous schist. East winds are the most troublesome to consumptive patients. There are sudden changes from heat to cold. There are Americans, Hiberno-Americans, and Irish. Consumption is rather rare. The report says that if any portions of the town are liable to the prevalence of phthisis it is the lower parts along the streams. Phthisis is hereditary in probably nine tenths of the cases, and is generally chronic. The reporter, Dr. Sargent, believes that by cleanliness, fresh air, good food, daily exercise, cool sleeping apartments, cool bathing, and frictions, the disease may be prevented in children hereditarily predisposed, and that there may be contagion by neglect of the above measures. There is a slight amount of malaria. Rheumatism is moderately prevalent; so is pneumonia. Bright's disease is not prevalent.

No. 3. Perkiomen; population, 2,515. The town is partly exposed, partly sheltered. West winds prevail. The air is cool and dry, except in valleys where there are streams; there it is foggy. Woods scanty. The soil is good; red shale. The people are engaged in farming. Consumption is chronic. Of the total deaths, about 16 per cent. occurred from phthisis and intercurrent pneumonia. The reporter thinks that malaria acts as an exciting cause in those predisposed to phthisis. No prevalence of rheumatism, pneumonia, or Bright's disease.

Northampton County.—Two replies. No. 1. Easton; population, 11,924 (1880). The principal part of the town is 190 feet above tide, a portion is from 290 to 300 feet above. The older part is sheltered, the newer part exposed. The wind during one year was from the northwest on 102 days; southwest, 150 days; northeast, 58 days; southeast, 23 days; north, 19 days; south, 5 days; east, 3 days. The atmosphere is warm. Fogs occur rarely. There is moderate shade in the streets. The rock is limestone. The older town is on diluvial soil—very rich. East and northeast winds troublesome to consumptives. The people are chiefly Americans; there are a few Irish, Jews, and negroes. Consumption is comparatively rare, mostly hereditary. The Americans are more liable to it, and of these, stonecutters. The disease is generally acute, sometimes chronic, usually hereditary. The reporter, Dr. Traill Green, has no evidence in favor of contagiousness. Rheumatism is prevalent; malaria, pneumonia, and Bright's disease are not. Death-rate to 1,000, 16+. All causes.

No. 2. South Bethlehem; population, 5,000; elevation, 400 feet. Sheltered. North and west winds prevail. The atmosphere is generally cool and dry. Fogs occur occasionally. The rain-fall is stated to be about forty-four inches. There is sandstone overlying limestone. The drainage is by cess-pool. The soil is good. Easterly winds are most troublesome to consumptives. No great liability to sudden changes. The people are largely occupied in factories. Consumption is not marked. A certain portion of the town, on made ground near a brook acting as an open sewer, is thought to be associated with phthisis; but that can not be said of individual houses. The disease is usually acute. In one very marked case the patient was cured by going to southern Colorado. Malaria is not especially prevalent; rheumatism is; pneumonia and Bright's disease are not.

SCHUYLKILL COUNTY.—Six replies. Five say that consumption is rare; one says it is not very prevalent. They usually speak of the liability of miners to the disease.

No. 1. Pottsville; population, 12,000; elevation, 614 feet. The town is sheltered by surrounding hills. The wind is usually southwest in clear weather. The air is cool and dry. There are no fogs. The country is hilly and dry, and woods are nearly destroyed. The soil is of medium or poor quality. East winds are troublesome to consumptives. The town is liable to sudden changes of temperature, and there is a decided difference between the temperature at noon and at night. The chief occupation is coal-mining. All nationalities are represented. Phthisis is hereditary in nine tenths of the cases. Rheumatism is prevalent; malaria, pneumonia, and Bright's disease are not.

No. 2. Mahanoy City; population, 10,000; elevation, 1,343 feet. The town is sheltered between two mountains, but is cold. At Mahanoy Plane the mean annual temperature for 1885 was 50·58°. The rain-fall was 52·24 inches. Fogs occur occasionally. The soil is poor. Easterly winds are troublesome to consumptives. The town is especially liable to sudden changes of temperature. The people are largely miners of all nations. The disease is chronic, and can not be averted except by change of climate. Malaria and Bright's disease are not prevalent; rheumatism and pneumonia are.

No. 3. St. Clair; population, 4,000; elevation, 752 feet. The town is exposed and cold. Northwest winds prevail. The air is cool and dry; no fogs. No woods. The country is hilly, and the soil gravelly; good drainage. Mixed population. Phthisis is usually acute. The reporter does not believe it to be contagious. Rheumatism, pneumonia, and Bright's disease are prevalent; malaria is not. (See Dr. Carr's report of hereditary cases.)

No. 4. Tremont; population, 3,000; elevation, 762 feet. The town is sheltered. North and west winds prevail. The air is cool and dry, and there are few fogs. Woods scarce. The country is hilly, and the soil gravelly of poor quality. North and northwest winds disturb consumptives the most. Changes of temperature at times marked; usually a heavy fall at night. Americans are the more liable to phthisis, the disease usually taking a chronic course. The reporter, Dr. J. W. Bird, cites two cases in which wives nursed consumptive husbands, and soon fell sick and died of the disease; also one case in which the husband, who had to nurse his wife, is now (March, 1886) sick, unable to work, and will eventually die of tuberculosis.

Malaria, rheumatism, pneumonia, and Bright's disease are not prevalent.

No. 5. Schuylkill Haven; population, 3,300; elevation, 625 feet. The town is sheltered in part by mountains. Northwest and southeast winds prevail. Mean annual rain-fall, 1880 to 1885, 38·85 inches. Woods scarce. The soil is clay and red shale; of medium quality. People employed in factories and shops. The people are of German and Irish origin. Phthisis is usually chronic. Rheumatism is prevalent: pneumonia and Bright's disease are not. Malaria prevailed for five years, owing to dredging a canal and dumping mud within the town. The intermittent character has given place to the remittent.

"Our town is on the left bank of the Schuylkill River, the greater part of it four miles below Pottsville. It lies in a valley running east and west, broken by hills, mountains bounding it north and south, about three miles apart. Soil principally red shale and clay; natural drainage good.

"Surface drainage of town good, but many cellars have water during wet months. The upper part is built on hill and inclined plane; the lower part is very level; simply enough inclination for surface water to run off by little artificial aid. Cellars often filled with water; sanitary condition of town otherwise very good. Malaria was unknown here till five or six years ago, when it appeared suddenly to a great extent. Schuylkill Canal runs through the town. For many years past the canal was annually dredged, and deposit thrown within town limits. About a year ago malaria disappeared almost as suddenly as it came, the fevers changing to a remittent type instead of intermittent, and less under the control and power of the cinchona alkaloids. During the last year new and extensive excavations have been made by the Pennsylvania Railroad extension, which did not renew malaria. The lower part of town was the main locality affected during the five years. It had the fogs and prevailing winds somewhat modified by the consecutive mountain boundary south and east. Had scarcely any typhoid fever during the reign of malaria. No severe epidemics of any form in the five years since I have been here. Had diphtheria last spring in some families; many cases assumed the croupous form. If there is any disease prevailing more than other common diseases, it is naso-pharyngeal catarrh.

"Respectfully, C. LEUKER."

No. 6. Pine Grove; population, 1,200; elevation, 520 feet. The town is exposed to north winds. Southwest winds prevail. The air is said to be damp and foggy. The amount of rain is put at 42 inches, and there is a great deal of snow. The town is shady and cool in summer. The country is hilly, and the rock is slate. The soil is of medium quality. East winds are troublesome to consumptive patients. Sudden changes of temperature are frequent. Phthisis, in what few cases there are, takes a chronic course; it is always hereditary. Malaria and Bright's disease are not prevalent; pneumonia and rheumatism are.

SNYDER COUNTY.—Two replies. Shamokin Dam; population, 300; elevation, 800 feet. The town is exposed and cold. The prevalent winds are north and west. The atmosphere is cool and damp; fogs occur. There is a great deal of snow; not much shade. There are sewers in the town. There are neighboring ponds and marshes. The soil is a sandy clay. The town is especially liable to sudden changes of temperature; there is a marked fall at night. The people are engaged in farming and lumbering; these are of American descent for several generations, and there are Germans. Consumption is very prevalent. In some families all die of it before the fortieth year. Three such families have but one representative remaining; the latter is forty years of age, and is dying of consumption. The offspring die between the twentieth and thirtieth year. The intermarriages prove that it is hereditary. A few of the family left years ago for Colorado, where they are stout and hearty.

The low and swampy areas and individual houses are associated with phthisis. These houses are damp. Consumption is prevalent among Americans, is usually acute, and is promoted by hereditary influences.

Malaria is prevalent, and consumption is especially prevalent in malarial districts. Rheumatism and pneumonia are also prevalent; Bright's disease is not.

No. 2. Freeburg; population, 700; elevation, 509 feet Sheltered. North and west winds prevail. The air is cool and dry, at times warm; fogs at times. Shade in streets. Trees have been cut down around some houses. Ponds, marshes, hills, and valleys. North winds troublesome to consumptives. People engaged in farming; of American descent and Germans. Not much consumption. Phthisis hereditary; infectious. Little malaria. Rheumatism, pneumonia, and Bright's disease not prevalent.

Susquehanna County.—Three replies. No. 1. Susquehanna; population, 4,000; elevation, 914 feet. The town is sheltered. North, south, and west winds prevail. The place is cold in winter and warm in summer. Few fogs. There is not much shade in the streets. The natural drainage is good. There is a loam of medium quality, with gravelly subsoil. The town is built on side-hills. Southerly winds are the most troublesome to consumptives. There are sudden changes of temperature. The people are employed in factories and machine-shops; about half are Americans, three eighths Irish, and one eighth Germans. Consumption can be said to be neither prevalent nor rare, and in nearly all cases is chronic, and in one half the cases hereditary. No evidence of contagion. There is only a slight amount of malaria, and no prevalence of rheumatism, pneumonia, or Bright's disease.

No. 2. Great Bend; population, 1,500; elevation, 884 feet. The town is cold. North and south winds prevail. The atmosphere is cool and damp. There is a medium amount of rain and snow. There is much shade from woods about the town, and there are hills and valleys. The soil is of medium quality. South winds are troublesome to consumptives. The town is liable to sudden atmospheric changes. The people are employed in farming and lumbering; they are Americans, Germans, and Irish. There is a moderate amount of consumption, which assumes both an acute and a chronic farm, and in three fourths of the cases is hereditary. Malaria, rheumatism, and pneumonia are prevalent; Bright's disease is not.

No. 3. Montrose; elevation, 1,053 feet. The town is exposed. West winds prevail. The air is cool and dry, and fogs are rare. There is a great deal of snow. There is not much shade from woods. The country is hilly, and the soil good. East winds are most troublesome to consumptive patients. Atmospheric changes marked. The people are engaged in farming and in factories. The people are chiefly of American descent. Phthisis is prevalent, particularly so among negroes. Neither pneumonia, malaria, nor Bright's disease prevails. Rheumatism is prevalent.

Venango County.—Six replies. Two from Oil City; population, 9,500; elevation, 1,008 feet on the flats; but the town is built on its seven hills. It is exposed and cold. Northwest winds prevail. The air is cool, and fogs are occasional. There is a great deal of snow, and not much shade. There are many hills and valleys. The soil is very poor. North and northwest winds are troublesome to consumptives. There are sudden atmospheric changes, amounting at times to 40° in six hours or less. The people are attracted by the oil-wells from all sides. This reporter, Dr. McCulloch, says phthisis is rare, generally acute, and largely hereditary, perhaps altogether so. From an experience of thirty-eight years' practice, the doctor believes phthisis to be infectious. Malaria and Bright's disease are not prevalent; pneumonia and rheumatism are.

The second reply from Oil City says consumption is prevalent, and describes the place as sheltered by hills. Phthisis hereditary in 72 per cent. of cases. In other respects the two accounts harmonize. The reporter, Dr. F. F. Davis, adds that the winds are very variable, sometimes blowing from different directions two or three times in a day; in summer from the southwest, and in winter from the northwest. When an east wind has been blowing, or one from the south, and there is a sudden change to the north and a sudden fall of temperature, consumptives suffer. Americans suffer most; Jews never. A majority of the cases are hereditary. Consumption is as common in the hilly portion of the city as in the lower and more wet portion. (See Dr. Davis's letter.)

Three replies from Franklin; population, 6,000; elevation, 954 feet. The place is sheltered. Westerly winds prevail. The air is damp, changeable, and fogs occur. The mean rain-fall (1875 to 1880), 40·9 inches. There is a medium amount of snow. Not much shade. There are hills and valleys. The soil is a sandy loam, with gravel, and is of medium quality. Southwest and northwest winds are most troublesome to consumptives. There are decided atmospheric changes. The people are attracted by the oil-wells, and are of all nationalities. All agree that consumption is rare. No especial house or race is associated with phthisis. Hereditary influence is noted as in nearly 100 per cent. of cases, and the disease is chronic. Some patients have been benefited by a sojourn in South Carolina, Florida, Colorado, and California. The total death-rate from all causes is 11·7 in 1,000.

Dr. Stephen Bredin writes:

"In a practice of twenty-five years I have known several families afflicted with infectious consumption.

"The W. family. A son, aged about thirty-five, a worker in walnut-wood rails and stairing, returned home after a hæmorrhage, and in the last stage of consumption. After his death, his sister in attendance took the disease, as did also two other members of the family, aged, respectively, about twenty-six, twenty-eight, and thirty. None of the large family non-resident took the disease. The house was well lighted, well warmed, not shaded. Circumstances above the average. The father robust, the mother spare in flesh, and nervous in temperament. The surroundings were a rich alluvial, well-cultivated soil, with a rather low, ill-drained meadow of forty acres or so in front. No consumption in or about the neighborhood until the arrival of the sick son.

"McK. family. Father stout, but afflicted with a fistula in ano all his life. Mother large, raw-boned, healthy, but spare, a constant weaver by occupation all her life. House an old, badly kept frame, fronting south on a low alluvial but well-drained meadow. No shade, badly lighted, ventilated, and warmed. Two sons, robust men, engaged in the business of oil-well drilling, and thus much exposed, returned home and died of consumption. Three sisters and one brother, all adults and apparently well, carried off by consumption in succession.

"D. family. Father stout. Mother thin but healthy. House new frame, well lighted and ventilated, poorly warmed. Close on the north and west side large, tall white-oak timber; soil stiff clay, rich alluvium. Son afflicted with chronic diarrhœa, malarial probably; after recovery, declined and died of consumption in six months. Two sisters taken, and both died of a rapid consumption on the same day. Another taken afterward. By my advice, family removed into another county; no more deaths; has returned and occupied the same farm for a period of years with no more deaths. House better warmed, and timber entirely cut away.

"R. family. Husband had cough and extreme pallor; family history bad, having lost three or more relatives with consumption. Wife's family history good; spare in habit, with nervous temperament. Under my treatment for a long time for palpitation and hypertrophy of the heart, having been afflicted previous to marriage. Mother of five children; youngest, one year old; developed, after weaning this child, a quick consumption. Autopsy revealed extensively diseased lungs. The husband survived her one year, dying in New Mexico of consumption."

No. 5. Emlenton; population, 1,100; elevation, 850 feet.

The town is sheltered; west winds prevail; the air is damp and fogs occur frequently. There are woods about the town, but not much shade in the streets. The country is hilly and the soil is poor. There are sudden changes of temperature. The people are occupied in farming and mining for oil. They are largely of American descent. Consumption is prevalent and chronic; hereditary in one half the cases. Malaria is becoming prevalent; rheumatism and pneumonia prevail; Bright's disease does not.

Dr. J. E. Hall writes that the town is situated in a narrow valley and on a side-hill on the east bank of the Allegheny River, 89 miles above Pittsburgh. The town is sheltered from west winds by a hill covered with hemlock on the west bank of the river. Acute phthisis is rarely seen. The doctor thinks that the gas from the oil-wells is injurious to persons in whom consumption is well marked, but is perhaps beneficial in the early stages; also in bronchitis. However, the gas is not considered an especially valuable therapeutic agent.

GROUP III.

BLAIR COUNTY.—One reply. Hollidaysburg; population, 5,000; elevation, 953 feet. Sheltered. West winds prevail. The air is cool and dry. Fogs are infrequent. There is a medium amount of snow. There is shade in the streets. Soil good. Northeast winds troublesome to consumptives. The people are engaged in factories and in mining, and of various nationalities. Phthisis not prevalent, but is more frequent among Americans and negroes; hereditary and chronic malaria not prevalent nor associated with phthisis. Rheumatism and pneumonia prevail in winter and spring. Bright's disease not prevalent.

The town is situated on a hillside. Rock, limestone. There are several sewers. No ponds or marshes. Meadows are dry. The town is surrounded, at a distance of one to ten miles, by an "amphitheatre of mountains."

CLEARFIELD COUNTY.—Four replies. Two from Clearfield; population, 3,000; elevation, 1,103 feet. The town is exposed and cold, though sheltered on east and west. Fogs occur frequently in the autumn. The site of the town is nearly level, having been at one time a swamp. The streets are shaded, so as to make the air rather cool and damp. The soil is of medium quality. There is an alluvial deposit ten to fifteen feet deep. At the bottom is a substratum of gravel; rock below and sand above. East winds are very troublesome to consumptives. There are sudden changes of temperature. The difference between noon and night is often very marked. The mid-winter temperature is steadily low. The people are engaged in agriculture and lumbering; they are of American descent chiefly. There are some Irish and Germans. Consumption pronounced by one observer to be rare and chronic, and by the other to be prevalent and acute. Both acknowledge heredity. The cases are largely among Americans, except in stone-cutters' consumption, where race does not protect. Dr. Hartswick believes that consumption is infectious, having met with a number of instances where the husband, wife, sister, or nurse has apparently contracted the disease after long and constant watching at the bedside. No malaria; rheumatism, pneumonia, and Bright's disease prevail.

No. 3. Houtzdale; population, 2,500; elevation, 1,800 feet. The town is exposed and cold, situated on a hillside. North and west winds prevail. The air is cool and dry; there are occasional fogs. There is not much shade. The soil is a loam and clay, of medium quality. North and east winds are troublesome to consumptives. There are great changes of temperature. The people are engaged in mining and in lumbering. They are Americans, German, and Irish. Phthisis is said to be comparatively frequent, and is both acute and chronic. Patients have been cured by going South. Dr. Todd furnishes the following history of a case of tuberculosis of left lung: "In 1880 I went to southern Texas and gained twenty-five pounds in weight. One year since, after an attack of typhoid fever and pneumonia, I weighed but one hundred and forty-five pounds, a loss of fifty pounds. I now weigh two hundred pounds, and am free from cough, night-sweats, and other indications of phthisis. Relief due, I am confident, to change of climate, use of cod-liver oil with hypophosphites, and whisky. Last winter I spent several weeks in St. Augustine, Fla." The majority of cases are hereditary. There is some malaria, but it does not appear to have any relation to consumption. Rheumatism and pneumonia prevail. Bright's disease does not, although there are some cases.

No. 4. Curwensville; population, 1,300; elevation, 1,141 feet. The town is very much sheltered by hills. The prevailing winds are northwest and east. Atmosphere cool, often damp; not much fog. There are woods near the town and abundant shade in the streets. The soil is poor, sandy, gravelly, and slaty; there is a clay subsoil. Drainage excellent. There are no ponds, bogs, or meadows. Very little marsh land. Hills. East winds trouble consumptives. Changes of from 40° to 50° occur in twenty-four hours, and a marked fall at night. The people are of American descent, engaged in farming and in lumbering. There are some coal-mines and a few factories. Consumption is said to be very prevalent and hereditary. A family is instanced, living ten miles from Curwensville, dwelling near the river in a very sheltered spot, where the sun shines but a few hours each day. The atmosphere is very damp and foggy. Four or five members of the family have died there, and more are likely to die, of phthisis. The disease is as frequently acute as chronic. There is little success in preventing consumption. No malaria. Very little Bright's disease; some pneumonia; more rheumatism.

CLINTON COUNTY.—No reply.

INDIANA COUNTY.—One reply. Indiana; population, 3,000; elevation, 1,300 feet. The town is exposed, on elevated ground. There are low hills on the west, north, and east. Temperature averages in July, 78°. In January, 32°. West winds prevail. Atmosphere changeable; dry. No fogs. Snow seldom lies long on ground. Not much shade. Soil, loam and slate, with clay. Rock, micaceous sandstone. Few ponds or marshes. East winds most troublesome. Sometimes severe changes in temperature. Farming is the chief occupation. Some lumbering and mining. Population mixed. "Consumption is becoming prevalent"; it is acute and chronic. Some cases have been cured by moving to the West and Northwest. Hereditary in nine tenths of the cases. The reporter, Dr. W. Anderson, is satisfied that consumption is contagious or infectious. No malaria. Rheumatism prevalent. Pneumonia prevalent in winter and spring. Bright's disease occasional.

LUZERNE COUNTY.—Two replies. No. 1. Wilkesbarre; population, 35,000; elevation, 480 feet. The city is in a long valley sheltered by mountains rising 1,200 feet above the valley. The city is hot in summer, cold and variable in winter. The winds are westerly and southwesterly. The air is often damp and foggy. The rain-fall averages 42 inches. Heavy snowstorms. There is shade from woods outside the town and in the streets. The soil is medium, alluvial, covering the carboniferous shales, slate, and clay. There are sewers. Few marshes or ponds. Hills. North and northeast winds are troublesome to consumptives. There are sudden atmospheric changes. The nights in hot weather are cool, even chilly. The occupation of the people is chiefly mining for coal. Phthisis is not very prevalent. There are individual houses where the disease has been frequent, but there has also been an hereditary influence. Such houses have usually had damp cellars or have been in the vicinity of standing water. In an extensive practice, Dr. Mayer has never seen an instance where nurse, husband or wife, mother or sister, contracted the disease during or shortly after its occurrence, progress, or ending. Malaria is prevalent. Dr. Mayer thinks that the congestions of malarial disease are probably frequent factors in developing phthisis in those who inherit a tendency to it, and he has frequently seen this occur. He has no evidence that malarial troubles are antagonistic to pulmonary consumption. Bright's disease is prevalent; so also is rheumatism. Cyclic albuminuria due to malaria is frequently observed.

Dr. Mayer adds:

"Nationality: About 40 per cent. American descent; 30, Irish and Welsh, with some English; 20, Germans; 2, negroes; 4, Jews; and 4, Poles and Huns.

"Consumption very rare among the Jews. Have only known of three deaths from it in twenty-five years among that race, and two of these were in the same family. It is very common among negro hybrids, particularly quadroons or octaroons. It is also most common among the native-born children of Irish and Welsh parents, who work in the mines or chutes, and in those of several generations of American descent; among young women working in dry-goods stores, and those in factories handling cotton and woolen goods.

"I have known of at least ten cases of incipient phthisis apparently cured by going from this district. A minority, say one third of these, by going to Florida, Texas, southern Georgia, etc.; two thirds by the change to the climate of Minnesota or that of the region about Denver. I never knew of a patient benefited by coming here from another locality.

"In spite of the repeated urgings of our doctors, our stupid town authorities have never given us a board of health, and in most of our cemeteries a doctor's certificate is not required before burial. I can find in the offices of the different cemeteries here no reliable records of the causes of death."

No. 2. Kingston; population, 1,600; elevation, 600 feet. The town is exposed. Westerly winds prevail in winter. Fogs occur. The soil is alluvial and very rich. Mining is the chief occupation, and all nationalties are represented. Phthisis is rare among the native Americans; common among the Irish miners. Hereditary influence is recognized, and miners suffer; the disease is both acute and chronic. Patients have been cured by going to California. The reporter, Dr. Corss, thinks the disease is infectious. Malaria is prevalent, but seems to have nothing to do with phthisis.

Dr. Corss says:

"The dust from anthracite coal is fine and impalpable, hanging in a black cloud over every breaker. It induces a form of consumption in which asthma is a prominent symptom. The miners who cut the rock tunnels suffer from a disease known among them as rock-miners' consumption; of this the prominent symptom is a shortness of breath, not generally asthmatic, but more like miliary tuberculosis. Rock-mining is considered more dangerous than coal-mining."

LYCOMING COUNTY.—One reply. Williamsport; population, 2,800; elevation, 700 feet. Sheltered. West and northwest winds prevail. The air is cool; there are no fogs. There is not much shade outside the town, but in the streets, and trees have been cut down for health. The soil is alluvial clay. There are meadows, marshes, and hills. The soil is rich on the low ground, poorer on the hills. East and northeast winds are troublesome to consumptives. There are marked atmospheric changes. The people are engaged in factories and in lumbering. Five per cent. are of German birth, 2 per cent. Irish, 1 per cent. Jews, 7 per cent. negroes. Consumption is prevalent. The reporter, Dr. Hill, has known whole families to die of consumption, but they have not all lived in one house. Hereditary tendency has extended to the third generation, though a majority of cases furnish no history of ancestral phthisis. Americans and negroes are particularly liable, and one half the cases terminate in six months. Dr. Hill believes patients may be cured by removal to high table-lands and pine forests; also, in contagion. There is a good deal of chronic malaria. Phthisis is not prevalent in malarial districts. Rheumatism, pneumonia, and particularly disturbances of all mucous membranes, are prevalent. Bright's disease does not prevail.

NORTHUMBERLAND COUNTY.—No reply.

PERRY COUNTY.—Two replies. No. 1. Newport; population, 2,500; elevation, 400 feet. The town is sheltered and warm. West winds prevail. Fogs occur. Not much shade. There are neighboring meadows, marshes, and hills. The soil is of medium quality and alluvial. East winds are troublesome to consumptives. Sudden changes of temperature are not frequent. People engaged in factories and in trade, and are of American descent. There is a moderate amount of phthisis, chiefly chronic and hereditary. Malaria is not especially prevalent, but seems to be an exciting cause of phthisis in those predisposed to it. Rheumatism, pneumonia, and Bright's disease are not prevalent.

No. 2. Landisburg; population, 400; elevation, 740 feet. Exposed. West winds prevail; air cool; fogs occur. Not much shade. Hills and valleys; poor soil. Southerly winds troublesome to consumptives. Liability to sudden atmospheric changes. People engaged in farming, and of American descent. Phthisis rather rare; usually acute. Rheumatism prevalent; pneumonia to a moderate extent. Bright's disease not prevalent.

SOMERSET COUNTY.—No reply.

TIOGA COUNTY.—Five replies. All pronounce consumption rare. The report from Arnot, a town of 4,600 inhabitants and at an elevation of 1,700 feet, says: "No resident ever had it here." In Arnot north and south winds prevail. The atmosphere is dry; fogs do not occur. There is a medium amount of snow; not much shade. There are ponds and meadows, hills and valleys. The chief occupations are coal-mining and lumbering. The people are of American descent, Germans, Irish, Poles, and Hungarians. There is some malaria; pneumonia and Bright's disease are not prevalent, but rheumatism is frequent from reckless exposure. The reporter, Dr. D. C. Matins, writes: "I have known many persons apparently in a decline cured entirely by inhaling the dust of these mines with the smoke from lard-oil lamps and burning powder, and drinking the water impregnated with sulphates." The doctor speaks of the frequency of miners' asthma and, from an experience of over two hundred autopsies, of the occurrence of "healed cavities."

No. 2. Wellsboro; population, 3,500; elevation, 1,300 feet. The town is sheltered. West and northwest winds prevail. Air cool; fogs rare. Streets shaded. Soil good. Sudden atmospheric changes. People of American descent and Germans. Phthisis chronic and more prevalent among negroes; usually hereditary. Rheumatism is prevalent; no malaria or Bright's disease; some pneumonia.

No. 3. Blossburg; population, 2,800; elevation, 1,348 feet. Sheltered. North and south winds prevail; air cool; no fogs. Surrounding hills wooded. The soil is a clayey loam of medium quality. No great atmospheric changes. Phthisis hereditary. Two houses (the best in town) have had several cases of phthisis; three wives and two daughters of Americans in two years past have been under reporter's care. The disease is chronic and hereditary. Malaria not prevalent. Rheumatism and pneumonia are not uncommon.

No. 4. Osceola; population, 800; elevation, 768 feet. Sheltered by hills on the north and south. West and east winds prevail. Rain and snow medium; little woods. There are meadows and valleys. The soil is very rich. South and east winds trouble consumptives. No great changes of temperature. The people are engaged in farming and are of American descent. Phthisis is chronic and in 80 per cent. is hereditary. The reporter, Dr. Humphrey, thinks he has evidence in support of infection. Malaria and Bright's disease are not prevalent. Rheumatism and pneumonia are.

No. 5. Cherry Flats; population (village), 110; sheltered. West winds prevail. Air is cool and dry. Not much shade. Meadows, hills, and valleys. Soil good; red shale. South winds troublesome to consumptives. There are sudden changes of temperature. Chief occupations are farming and lumbering. People of American descent and Welsh. Phthisis chronic; hereditary in two thirds of cases. Infectious in rare cases. Little malaria. Rheumatism and pneumonia are prevalent. Bright's disease is not.

Dr. H. G. Martin reports a patient with incipient phthisis cured by going to Colorado, where he has lived twenty years. On three occasions he has returned home, but at these times cough recurs. In thirty years' practice, and twenty-five of that an extensive practice, "I have treated but ten or eleven cases; one of them was of twenty years' standing when I first saw the case, and the patient lived nineteen years. One other case ran for fifteen years. I have a case at present of four years' standing, and the patient may die of old age. She is Irish; the rest have all been Americans."

Warren County.—Two replies. Irwin; population, 2,000; elevation, 800 feet. The town is exposed and cold. Northwest winds prevail. The air is cool and dry. Small amount of snow. There is not much shade outside the town, but some in the streets. There is a liability to sudden atmospheric changes. The people are largely foreign of every nationality. Phthisis is only moderately prevalent. In two houses there have been six cases; all hereditary; one case acute. It is prevalent among Americans and is mostly chronic. The reporter, Dr. Humphrey, does not believe that the disease can be prevented in children hereditarily predisposed. He says he has known cats become tubercular from eating sputum. Malaria is not prevalent; pneumonia moderately so. Bright's disease rare. Rheumatism prevalent.

No. 2. Sheffield; population, 1,500; elevation, 1,100 feet. Sheltered and warm. West winds prevail. Air cool and damp; fogs occur. Medium amount of snow and rain. There are ponds and marshes, hills and valleys. Soil good. North winds troublesome to consumptives. The people are engaged in factories and in lumbering. They are of American descent, German, Irish, and Swedes. Consumption is prevalent; Americans chiefly affected; usually chronic; three fourths of cases hereditary. Some malaria. Rheumatism, pneumonia, and Bright's disease are prevalent.

Wayne County.—One reply. Honesdale; population, 7,000 (1880); elevation, 1,000 feet. In the county it ranges from 714 to 2,040 feet. Surface very irregular. There are hills and valleys; lakes and ponds numbering 76. Town exposed northwest and south; sheltered east and west. Northwest winds prevail. Air cool and dry; at times damp. Fogs occur. Average rainfall for last five years, 38 inches. Average snow-fall, 73 inches. In 1857–'58, snow-fall, 27 inches; in 1867–'68, 115 inches. Storms come with northeast, east, and southeast winds. Trees about the town; have cut trees in streets. Soil good to medium; red shale. Liability to sudden atmospheric changes; sometimes a fall of fifty degrees between noon and night. People engaged in farming and lumbering, of American descent, German, and Irish. Phthisis rare in town, prevalent in country. Individual houses damp, associated with phthisis. The disease is acute; hereditary influence marked. Malaria prevalent in town, and consumption especially so in malarial districts. Rheumatism, pneumonia, and Bright's disease are prevalent in the county, but not in town.

Westmoreland County.—Three replies. No. 1. Ligonier; population, 700; elevation, 1,250 feet. Average general mortality, 18 in 1,000; from consumption, for thirteen years, one in 16·48 of total mortality.

Loughlinstown; population, 192. One death from phthisis in 4·03 of total mortality.

Stonerville; population, 400; elevation, 750 feet. The town is sheltered, located in a flat. The air is cool and dry. Fogs seldom occur. The soil is clay over limestone. There are hills, valleys, and meadows; no sewers, ponds, bays, or marshes. The soil is very rich. East or southeast winds are troublesome to consumptives. There are sudden atmospheric changes, and there is a moderate fall of temperature at night. The people are farmers and miners, and are American, German, and Irish. Consumption is rare; hereditary in 80 per cent. and chronic. Americans of Irish and German descent have suffered the most. Miners are particularly affected.

Dr. Rigg, in the case of a lady patient, when there was little or no improvement in Stonerville, sent her to New Mexico, to a warm location, 2,500 feet high. After staying one year, she came back seemingly cured. At the end of six months the old trouble returned. She was then sent to Somerset County, Pa., to an altitude of nearly 2,500 feet. She has been there eighteen months, and seems to be perfectly well.

Pneumonia and Bright's disease are prevalent. No prevalence of heumatism.

No. 3. West Newton; population, 2,500; elevation, 782 feet. Town sheltered. South, east, and west winds prevail. Air dry; fogs do not occur often. Not much shade. Hills and valleys. Soil medium and good. Northern winds troublesome to consumptives. There is a liability to changes of temperature. The people are engaged in factories and in mining. They are of American descent, German, and Irish. Consumption is rare and of chronic form and hereditary. The reporter, Dr. Robinson, thinks he has evidence in favor of infection. Malaria and Bright's disease not prevalent. Rheumatism and pneumonia moderately so.

York County.—Six replies. One says consumption is rare, and four say that it is prevalent. Dr. J. C. Gable and Dr. A. A. Long, of York, report: population, 20,000; elevation, 450 feet. Sheltered. West winds prevail. Air damp and variable. Fogs occur. Streets well shaded, but no trees. Soil very rich. South and east winds troublesome to consumptives. Liability to changes of temperature. The people are engaged in farming and in factories; they are Americans, chiefly of German descent. Dr. Gable states that the damp portions of the town are associated with phthisis. All houses more or less damp. Americans and negroes liable to phthisis; the latter is generally chronic, and in three fourths of cases hereditary. Malaria is prevalent, and consumption is prevalent in malarial localities. Rheumatism, pneumonia, and Bright's disease are more or less prevalent.

Dr. Gable relates the case of Mr. W. H. K., who died of phthisis after an illness of two years and a half. His wife, of healthy stock, was his constant attendant, and lived in the same room with him. Before his death she showed prodromes of phthisis, and died one year after the husband.

No. 3. Hanover; population, 3,000; elevation, 600 feet. West winds prevail. Air cool and dry. Fogs rare. Rain-fall has been thirty-eight inches. Not much shade. Meadows and valleys. Good soil; limestone. East winds troublesome to consumptives. No liability to sudden atmospheric changes. People engaged in farming and in cigar factories; of American descent. Phthisis frequent in American "well-to-do" families. The disease is chronic, and nearly always hereditary. Reporter does not believe in infection. Malaria and rheumatism not prevalent. Pneumonia prevails, and Bright's disease is increasing.

No. 4. Wrightsville; population, 2,000; elevation, 300 feet. Exposed to both heat and cold. Northwest winds prevail. Atmosphere generally cool; fogs frequent. Little shade. Limestone. Hills north and south. Ponds and marshes north. River east; creek south. Soil very rich. Liability to great atmospheric changes. People engaged in cigar factories, quarries, lime-kilns, saw-mills, etc. American-born outnumber negroes, Irish, and Germans. Houses near water more closely identified with phthisis. The proximity to water believed to induce consumption. The houses associated with phthisis are damp and cold. Phthisis more frequent among the poor; it is acute and chronic, and generally hereditary. The reporter, Dr. Rebman, thinks he has seen children hereditarily predisposed saved from phthisis by protection from cold and wet, etc. Consumption is more prevalent in miasmatic districts. Rheumatism and pneumonia prevalent; Bright's disease especially so.

No. 5. Dillsburg; population, 500; elevation, 1,065 feet. Sheltered. North and west winds prevail. Shade in the streets. No liability to sudden atmospheric changes. People engaged in farming and mining; of American descent. Consumption rare. There is a central portion of the town having damp cellars and yards where consumption is frequent. These localities not influenced by heredity. Phthisis chronic; not at all hereditary. The reporter believes that consumption can be prevented from occurring in children hereditarily predisposed by removal from family influences, and "plenty of good whisky." He also believes that phthisis is infectious. No malaria. Rheumatism, pneumonia, and Bright's disease not prevalent.

No. 6. Hallam. In a limestone valley, ranging from one to two miles wide, extending west from the Susquehanna. A range of low hills of slate and limestone and flint, north and south, near Wrightsville. Springs and running streams numerous. Through the valley and on the north side of the valley consumption is seldom seen; but on the south side it is frequent. Reporter can not explain why.

In summer, the air is warm and often damp and foggy; in winter, cold and dry. Timber covers about one sixth of area. Consumption frequent, chronic, and hereditary. There is a good deal of malaria; no relation to consumption. Rheumatism and Bright's disease are not frequent. Pneumonia is prevalent.

Group IV.

Clarion County.—One reply. No. 1. Clarion; elevation, 1,947 feet. The town is exposed. In spring and fall there is foggy and wet weather. Liability to sudden atmospheric changes. West winds prevail. Rain-fall, forty-two inches in 1885. Not much shade. There are meadows, marshes, hills, and valleys. Soil medium. West and northwest winds troublesome to consumptives. The people are engaged in farming, mining, and lumbering. The people are Americans, Germans, Irish, and Jews. Consumption moderately prevalent; increasing each year; occurs in Americans and negroes; usually chronic. Patients have been cured by removal to San Antonio, Texas. No true malaria. Pneumonia occurs in spring and autumn. Bright's disease not prevalent.

Elk County.—Two replies. No. 1. Ridgway; population, 2,000; elevation, 1,437 feet. Town sheltered, but cold. Wes and northwest winds prevail. The air is cool and damp. Fogs occur. There is shade from woods about the town. There are meadows, hills, and valleys. Soil of medium quality. West and northwest winds troublesome to consumptives. There is a liability to sudden changes of temperature; great fall of temperature at night in warm weather. People engaged in lumbering; of American descent, German and Irish and Swedes. Consumption of "medium" frequency. Nearly all the pulmonary disease has been in the vicinity of a tannery on the north side of the town, near the Elk Creek, inhabited chiefly by Swedes. Disease chronic; apparently hereditary in twenty per cent. of cases. No prevalence of malaria; no relation of this to consumption. Rheumatism and pneumonia prevalent. A few cases of Bright's disease.

No. 2. Dagus Mines; population (within radius of one mile), 3,000; elevation, 2,000 feet. The town is sheltered and cold. West and north winds prevail. Air cool, damp. Occasional fogs. Not much shade. Meadows, marshes, hills, and valleys. One marsh northwest of town a mile and a half long, a quarter to a half mile wide. Snow in winter two to four feet deep on level, and lasts five to six months. In 1884-'85 lasted six months less three days. Temperature in winter usually from + 10° to — 20° F. In summer it reaches 95°, but usually about 75°. Sudden changes. Soil poor. People chiefly of foreign birth; few Americans. Consumption very rare; acute and chronic. Malaria or Bright's disease not prevalent. Rheumatism, pneumonia, and bronchitis frequent.

McKean County.—One reply. Smethport; population, 1,500; elevation, 1,500 feet. The town is in a valley. Northeast and southwest winds prevail. The air is variable. There are fogs. Medium amount of snow and rain. There are ponds and meadows. The soil is of medium quality. Northeast winds are troublesome to consumptives. There are sudden changes of temperature. People engaged in farming, lumbering, and in factories; American and Irish. Consumption is rare, chronic, and always traceable to syphilis; it is amenable to specific treatment. Malaria not prevalent, and not associated with phthisis. Rheumatism prevails among the low Irish. Pneumonia is moderately prevalent. Bright's disease is occasional.

MOLLITIES UTERI.*

By CHARLES D. SCUDDER, M. D.

Four years ago a nulliparous patient suffering from marked anteflexion of the uterus presented herself at my clinic in the Demilt Dispensary. She returned shortly after with an evident retroflexion of the organ, and in the course of the next half-year this alternate anteflexion and retroflexion showed itself repeatedly. The infra-vaginal part of the cervix and the body were normal, so I decided that the supra-vaginal cervix, and that portion of uterine tissue immediately above it, were in an atonic or softened condition. Close study, and later on a careful history of cases, showed that this atony was by no means rare. A series of observations was made which may help in clearing up still further the question of uterine pathology, and which will be of unquestionable interest to this society as throwing light on a few questions of prognosis and treatment in patients suffering from certain varieties of uterine affections.

The supra-vaginal cervix, and that portion of the uterus

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containing the internal os, will be called the middle segment of the uterus as distinguished from the cervix—that part observed by the aid of the speculum—and the body or upper third of the organ. *Mollities* suggests itself as an excellent term wherewith to designate the extraordinary softness which sometimes affects the uterus. From the time the case referred to above was treated to the present a large number—about one hundred in all—have been recorded, and fully two hundred more patients have been seen, who collectively furnish sufficient material to present results from a clinical standpoint. The writer takes the liberty of limiting his statements to his own experience, as the literature on this subject is diffuse and unsatisfactory.

Every one is familiar with the mollities of the cervix that appears in pregnancy. If the middle segment of a pregnant uterus is carefully examined, an evident softening will frequently be detected. The examining finger can indent the uterine tissue, and the fundus can be raised and depressed without moving the cervix. This sign of the early weeks of pregnancy is valuable, although it is neither invariable nor infallible. Mollities will also be found—rarely, however—in the body of a gravid uterus. Such uteri are so soft that the transverse diameter is often enlarged, and the antero-posterior diameter so markedly diminished that the fœtus apparently lies with its length directed transversely in a soft sac, which can be molded by the hand, and which may allow—as noted in one case—the utmost perfection in the determination of position when confinement is close at hand. In the case just mentioned, the abdominal walls being thin, the recti muscles being separated, and the child lying in the softened fundus of an anteflexed uterus—the whole mass forming a large hernia and hanging half-way to the knees—it was somewhat difficult to decide whether an extra-uterine pregnancy was not present. Again, mollities affects the whole gravid uterus. The order of frequency in the gravid uterus seems to be mollities of the cervix, of the middle segment, of the body, and of the entire uterus.

This same softness exists as a diseased condition in both nulliparous and multiparous women. The cervix may be very soft, the middle segment may be atonic, the body may be the site of this disease, or mollities may affect the whole uterus. The diagnosis can readily be made. A softened cervix is at once appreciated by the examining finger. A softened middle segment can be detected by raising the body of the uterus with the vaginal finger and depressing it with the abdominal hand. If mollities of the middle segment exists, the body will readily be moved without a change of axis in the cervix, showing that an exceedingly soft tissue lies between the body and the cervix. Mollities of the body is easily diagnosticated, if one has acquired skill in examination, by the readiness with which it can be molded. There is also a characteristic lack of definition in the uterine body which confuses many who are not practiced in conjoined manipulation. When the uterus, as such, is softened, definition is almost entirely lost, and the organ feels like a thick, wet dish-rag.

In point of frequency, I have found mollities of the middle segment to be most common in the nulliparous and in the multiparous non-gravid uterus; next, mollities of the fundus; then mollities of the cervix; and that of the whole uterus most infrequent.

Mollities seems to be due to malnutrition of the body as such, and of the uterus in particular. Bad hygiene in the matters of exercise, ventilation, food, rest, clothing, etc., tends to produce a lack of vigor, which finds local expression in an atonic uterus. This cause may be considered as a predisposing and also, in some cases, as an exciting cause of mollities. Changes in uterine nutrition induced by (*a*) congestions, or inflammations of the uterus, ovaries, or surrounding tissues and organs, and (*b*) by pregnancy, neoplasms, etc., act as potent factors in producing this condition. So that it may sometimes be secondary to uterine disease, but often a primary cause of uterine disease, when it involves either the body or the middle segment of the uterus. It seems clear to me that mollities of the middle segment, produced by systemic depression, is the starting-point of a large number of uterine and ovarian diseases.

Advancing from clinical diagnosis to clinical pathology, mollities of the cervix presents nothing of interest; that of the fundus and of the entire uterus exhibits the phenomena of sluggish circulation and complete atony; but when the middle segment is affected, a most interesting chain of phenomena, due to the results produced by this softening, will be seen. A young nulliparous woman presents herself, complaining of general ill-health and of bearing down when exercising. She has paid no attention to the laws of health, either through force of circumstances, ignorance, or carelessness, and complains of loss of appetite, costiveness, headache, fatigue on rising in the morning, general languor, etc., in addition to pelvic distress. An examination shows an atonic middle segment, and nothing else. Simple treatment is proposed and successfully carried out. Later on she may return. Cross-examination shows that proper hygiene has again been neglected. The symptoms complained of previously have returned, with the addition of increased discomfort on exertion and painful menstruation on the first and second day. Conjoined manipulation now shows a well-marked anteflexion, with a softened middle segment. If this is not relieved by proper treatment, the flexion will become very marked. Frequent micturition and troublesome uterine dysmenorrhœa will add themselves to the other symptoms, and later on ovarian dysmenorrhœa will develop. The body of the uterus will be found enlarged and sensitive. Menorrhagia and sometimes metrorrhagia will appear. The ovaries become sensitive and subsequently enlarged.

This represents a natural pathological series of phenomena, which present themselves in different stages to the notice of physicians. The multiparous patient differs only in that she generally starts with a subinvoluted uterus, the heavy body of which flexes itself far more readily than that of the unimpregnated uterus, if mollities of the middle segment is present. But the subjective and objective symptoms are about the same. The flexion seems to be determined by the position of the uterine axis. If this inclines backward, a retroflexion can be inaugurated by any over-exertion. If it inclines forward, an anteflexion is likely to take place. Of course, if the flexions are not restored naturally, or by the aid of the physician, they will in time become fixed, and mollities will give place to a hardening of uterine tissue.

The prognosis of mollities is generally good if no exhausting disease of other vital organs is present and if hygienic regulations can be carefully observed. If a flexion exists with mollities of the middle segment, the conditions are most favorable for its relief, as this softness allows of easy reduction, and treatment can be adopted which will maintain the body of the uterus in its normal position and restore tone to that organ.

Treatment must be constitutional and local. Appropriate food, proper exercise, a correct attitude, free-fitting clothing, lying quiet at least one hour a day, breathing pure air, etc., must be insisted upon in every case. Quinine, aloes, capsicum, and nux vomica have proved to be excellent uterine tonics. The bowels should be carefully regulated with fruit, vegetables, and water. If costiveness is obstinate, the following recipe for bran biscuit will often be efficacious:

Take of bran, one quart; flour, one pint; milk, one pint; molasses, eight tablespoonfuls; baking soda, two teaspoonfuls. Mix. Bake as soda biscuit. One or two at each meal.

If these fail, cascara, aloes, etc., must be employed.

Flexions should be restored by digital reposition, the patient lying on her back in anterior displacements, and being placed in Sims's, or preferably the genu-pectoral position, if she suffers from retroflexion. Resting ten minutes three times a day in the genu-pectoral position relieves and assists in the cure of both anteflexions and retroflexions, when atony of the middle segment exists. Reposition with the Sims or Elliot repositor can readily be accomplished, and pessaries suitable to each case, or even cotton tampons, will facilitate a cure.

Allowing for prejudice, clumsiness in adjusting pessaries, and lack of judgment in the selection of proper instruments, a great deal of the opposition to these invaluable aids is due to not recognizing the presence or absence of mollities of the middle segment of the uterus. The writer has seen anteflexions of marked degree, in which this condition was present, relieved entirely by attention to hygiene, without any local treatment. Pessaries used in this class of cases often benefit, without any manual interference. But, if the uterine tissue has become hardened, the continual pressure of an unyielding, sensitive, engorged body upon a rigid instrument will give rise to great discomfort, and sometimes positive injury. In like manner, repositors, used when mollities of the middle segment is present, are valuable; whereas, if the uterus has been so long flexed that the atony has disappeared, the greatest skill is required to effect the desired result, and hence many regard the repositor as a dangerous instrument. Again, digital reposition has often been abandoned and set at naught because the practitioner has failed in reducing a rigid flexion after a few trials. If he recognizes mollities he can predict success by reposition. If it is absent, he knows that he has a difficult case to deal with, and can make a guarded prognosis and expect long-continued treatment before the case can be cured.

Uterine massage will be found easy and of very great service if mollities is present.

In conclusion, I would urge the members of this society to observe for themselves the several points raised. Careful study will probably confirm what has been said as to the presence of such a condition as mollities; its importance as a pathological factor, especially when the middle segment of the uterus is affected; and the value of recognizing the condition with reference to prognosis and treatment in certain kinds of uterine disease.

Correspondence.

LETTER FROM PARIS.

Gaseous Medication by the Rectum.—Iodoform in the Treatment of Cold Abscesses and Phthisis.—Tannin in the Treatment of Inflammations.—The Diet in Various Diseases.—The Fasters.

Paris, *December 1, 1886.*

Something in regard to the latest French therapeutics will not fail to interest your readers, and first of all we will speak of the new method of treating disease with rectal injections of carbonic-acid gas medicated with various substances. It was shown many years ago by the physiologists that gases introduced in this way would be eliminated by the lungs, but the credit of turning this fact to account in the treatment of disease belongs to Dr. L. Bergéon, of Lyons. The system is now being tried in most of the large hospitals in Paris. At first there was quite an expensive apparatus needed to get a supply of gas to use, but at present we are able to indicate a method any one can use: First, to get the carbon dioxide pure, employ the common siphon of Seltzer water used in the hotels and restaurants. It is charged with carbonic-acid gas, and, on turning it upside down, so that the water can not escape, and then pressing the handle, the gas will run out, and when it fails the bottle is to be "well shaken," when it will give much more gas. Two bottles will give about enough to make an injection (about four to five pints). The gas taken in this way is perfectly pure and well washed, and it should be caught in a rubber bag such as dentists use for administering nitrous-oxide gas, and the medicinal substance added to it. Then all is injected into the rectum with one of the usual injection-bulbs. It is already quite proved that the medicinal substance will be eliminated, with the gas, by the pulmonary vesicles, and the results obtained in phthisis are important enough to predict for the method considerable success. It is now on trial in a large number of patients whom we see in the hospitals, and we hope to be able before long to send you full reports of the results from Professor Germain Sée and Professor Cornil's service.

The next new thing here is the use of injections of iodoformized ether in the treatment of cold abscesses. Professor (agrégé) Réclus, who is now lecturing in the place of Professor Richet at the Hôtel Dieu, says that it is better than the older method of large incisions and *raclage*, and it gives better results. He gives the following formula:

Iodoform	5 grammes	(75 grains);
Ether....	100 "	(1,500 ").

Dissolve.

All this amount may be injected into the sac of an abscess, of course, after having allowed the pus to run off. One application will sometimes result in curė; if not, it is to be renewed, and in small abscesses a stronger dose may be used, say double the proportion of iodoform. It is not toxic, and will not do any harm in these doses, and the liquid will penetrate to all the diverticula of the abscess. A little collodion is to be put over the mouth of the puncture made, and one must not be frightened by the swelling that will result from the injection, as it will gradually subside.

While speaking of iodoform we are reminded that Professor Verneuil has noted for some time back that some of his young patients who were suffering from phthisis, and on whom iodoform was being used externally, for various causes, improved very much in health; and this led to his trying this substance internally with, we are informed, most remarkable results. This matter is also in the experimental stage, and time will soon show its merits.

Dr. Duboué, of Pau, is a great advocate of the use of tannin, and states that, when it is administered internally to the entire exclusion of any other remedy, it will produce a rapid improvement in all the different symptoms caused by the most serious forms of acute inflammations, whether they are partial or general, and no matter if they have their seat in the serous membranes of the cranial, thoracic, or abdominal cavity. Employed also with a certain amount of perseverance, tannin constitutes a most powerful means of opposing all the chronic inflammations, such as chronic pleurisy, and the partial forms of peritonitis. It has also been used with great success in applications to the mucous membranes in such inflammations as enteritis, bronchitis, etc. The dose should vary a little according to the patient and the disease, but it can be carried up from 20 or 30 centigrammes to 10 or 12 grammes a day without losing its inoffensive character. Tannin given in health produces constipation, which prevents its use, but it has quite a different effect in disease, where its action is exceedingly rapid, particularly in cases where there is an abundant serous effusion. The tannin used should be perfectly pure, when it is of a bright yellow color (the impure sorts are reddish). In ninety-four cases treated, Dr. Duboué professes to have produced cures in most of them, and in all a considerable amelioration; and some of them were serious cases of pelvi-peritonitis, perityphlitis, purulent pleurisy, internal strangulation, etc. M. Duboué gives the tannin pure, in wafers, in pills, or in a potion. For the benefit of those who would like to try his panacea we give the formula of the last:

Pure tannin. 1 to 3 grammes (15 to 45 grains);
Gum water.. 125 to 180 grammes (1,875 to 2,700 grains).

Dissolve. A teaspoonful to be taken every hour during the day only.

M. Dujardin-Beaumetz gives the alimentary *régime* to be followed in various diseases. First, as to diabetes, he advises the mixed treatment (Professor Bouchardat's). Some form of bread he considers to be an alimentary necessity, and he thinks the gluten bread, so common here in all the bakers' shops, an important therapeutical and hygienic aid in this disease. Potatoes, of all the feculants, he recommends because they contain the smallest quantity of starch, and therefore produce the least amount of sugar; and they are to be used as much as possible. The use of alcohol must be restricted, but a little wine may be taken (claret) if it is mixed with some alkaline mineral water, such as Vichy, but nothing must be drank between meals. Tea and coffee must be taken weak and without sugar; an infusion of quassia or cinchona may be taken as a drink if there is much thirst. Soups are allowed, and one made with poached eggs is highly recommended. Peas and all the bean tribe are forbidden, but all fish are permitted when given without sauces made of flour and cream. Glycerin may be used in place of sugar in tea and coffee. Fruits are not allowed, but most vegetables are, except beets, carrots, and turnips. Muscular exercise and massage are advised. The *régime* must in fact fulfill these three conditions: 1. Furnish the patient an alimentation that is most assimilable. 2. Excite the functions of the skin. 3. Facilitate the assimilation and combustion of the albuminoids introduced by the alimentation. Where there is albumin in the urine, the indication is simply to give as little albumin as possible, and the milk diet is the best form of aliment, but the vegetable *régime* may be used. If meat must be added, let it be pork, either fresh or in the form of ham or, better, bacon, which may be quite fat. Wines like the red clarets, containing a good deal of tannin (St. Raphael, etc.), are given, although never pure but along with an alkaline water; and, as to eating, the meals should be frequent and small rather than large at any one time. In the febrile states, the digestive tube does not lend itself easily to the absorption of the albuminoid substances, and the organic products of disintegration accumulate in the economy and produce toxic phenomena; so the most important rule is to limit the food to liquids and saline substances, and this reduces us to soups, milk, and alcohol. The first two will introduce liquids and salts into the system, and the last will repair the loss in minerals such as potassium, sodium, etc., while the water will permit the elimination by the urine of the different extractive principles accumulated in the economy. As to the alcohol, it is an aliment which undergoes in the system a more or less complete combustion to the detriment of the oxygen of the blood, and therefore diminishes for the time being the phenomenon of combustion itself, and at the same time it lowers the internal temperature, so that it is doubly a saving element, as it also acts on the nervous system, giving it strength and tone. In hospital practice here, "*Todd's potion*" is the form of alcohol used in all cases of fevers, pneumonias, etc., but Dr. Dujardin-Beaumetz prefers to order in private practice the strong wines, like the Spanish, Portuguese, and Sicilian brands.

Merlatti is on his thirty-fifth day of fasting, and Succi has commenced a thirty-day trial, but, as the daily papers give full details of this rather unimportant matter, and the leading men in the medical profession here do not take any part in the affair, we leave it to the newspapers.

Medical Men as Confessors.—The "Lancet" says: "The question of confidence between patient and medical adviser has been again raised, and has been under discussion in the columns of a clerical contemporary, apropos the relations between priests (Roman or Anglican) and those who accept them as spiritual directors. We do not think the two functions, that of spiritual and that of medical adviser, are comparable. It is the privilege of our profession to deal with ascertained facts—pathological, physiological, or psychological. We do not, of course, mean to imply that the subject-matters of belief among religionists are not verities. It is outside our province to determine whether they are or not. Toward the peculiar tenets of the various sects the only legitimate position of the scientist as such is agnostic. Meanwhile all that lies within *our* province is fact, and this we can treat as the data of a profession which is—or ought to be—strictly logical and rational in its aims and influences. We do not think priests should allow themselves to wander beyond the limits of the unknown. Their function is wholly spiritual, and they ought not to deal with the known and material except in so far as it may directly relate to what they conceive to be spiritual. It is neither expedient nor safe for those who are not thoroughly versed in a subject to treat it practically. Morals properly so called are practically outside the ken of the priest in proportion as they are, in a complementary sense, within the province of the physician. Let them leave the physiological moral of life to us. In touching it they play with edged tools, and no wonder if they wound themselves and the sensibilities of their more intelligent friends and disciples."

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THE EXTRA-UTERINE CAUSES OF UTERINE SYMPTOMS.

For some time past there have been indications that the endometrium was to be dethroned from the high place it has held for many years in the minds of gynæcologists, and to be succeeded by the extra-uterine pelvic structures, especially the peritonæum and the cellular tissue. We regard it as the crowning glory of Dr. Emmet's labors that it is largely to his influence, working most of the time against heavy odds, that the change of opinion now unquestionably entered upon is to be attributed. Dr. Emmet's ideas of pelvic pathology have of late become quite thoroughly known, but they were so well expressed by him in a paper entitled "Certain Mooted Points in Gynæcology," read at the recent meeting of the British Medical Association, that we think it will prove profitable to our readers if we lay before them some of the leading points in the paper as it appears in the "British Medical Journal."

Founding his argument to a great extent on therapeutical results, Dr. Emmet begins by remarking that pessaries give relief, not by maintaining the uterus in its normal posture, but by supporting the over-stretched pelvic fascia, and thereby diminishing the congestion due to relaxation of the vessels—in short, their office is to elevate the entire uterus to its proper plane in the pelvis, and not merely to correct a faulty or exaggerated inclination. If the organ is lifted above its normal plane, he says, the patient has the same vesical symptom as if it were prolapsed, *i. e.*, a frequent desire to urinate, due to traction upon the neck of the bladder at its point of attachment to the pubes. The term obstructive dysmenorrhœa he regards as a misnomer, since flexures of the uterine body do not close the canal sufficiently to prevent the escape of the menstrual blood. The association of the two is accidental, although both may be due to the same cause. Hence operations for enlarging the canal can produce only temporary benefit, while they may result in lighting up an old peritonitis, evidences of which are seldom absent in these cases. Intra-uterine medication and the frequent use of the curette he characterizes as the outgrowth of the mistaken idea that menorrhagia is due to causes within the uterus instead of without that organ. Ergot is given indiscriminately for the purpose of checking the excessive flow, especially when the latter is supposed to be due to the presence of a small fibroma; but, if the os uteri is undilated, and the tumor is so situated that it can not be expelled by the uterine contractions, the result of the latter is simply to increase the general pelvic congestion by diverting the blood from the womb. Discharges from the uterine canal, when not due to malignant disease or to specific infection, are caused by various obstructions from old pelvic inflammation. Dr. Emmet attributes the improved results that he has obtained in his private hospital during the past seven years to the fact that he has abandoned intra-uterine applications in favor of those made to the vagina, and to his having limited the use of pessaries to a few carefully selected cases, endeavoring to correct prolapse of the uterus by the systematic employment of glycerin tampons, but not interfering with versions or flexions until the evidences of pelvic inflammation have been removed.

From another source, and from an observer viewing the subject from a different standpoint, comes a contribution that it is interesting to compare with Dr. Emmet's. We refer to a paper on "The Relation of the Endometrium to Affections of the Annexa," by Dr. Czempin, published in the "Centralblatt für Gynäkologie." That gentlemen endeavors to show that, while in the majority of instances an inflammation of the uterine mucous membrane extends outward to the oviducts, in some cases it is secondary to disease of the appendages. As a proof of this statement, he calls attention to the change in the character and quantity of the secretion of the mucosa and the sudden hæmorrhages from it which attend active disease of the appendages or the adjacent serous or cellular tissue. Even where a salpingitis is secondary to an endometritis, if the latter is cured, he says, a fresh inflammation in the tube will sometimes cause a return of the intra-uterine trouble. He calls attention also to the persistent metrostaxis which is not infrequently noted after the removal of both tubes and ovaries. This phenomenon, he thinks, is referable to the congestion of the endometrium produced by the constant irritation from cicatrices or adhesions in the pelvic peritonæum, especially in the broad ligaments, resulting from the operation. In several such instances fungosities have been found, but in others the employment of the curette has shown the endometrium to be either simply hypertrophied or quite normal.

ITEMS, ETC.

Infectious Diseases in New York.—We are indebted to the Sanitary Bureau of the Fourth Division of the Health Department for the following statement of cases and deaths reported during the two weeks ending December 14, 1886:

DISEASES.	Week ending Dec. 7.		Week ending Dec. 14.	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever	25	11	31	10
Scarlet fever	28	1	42	8
Cerebro-spinal meningitis	3	3	5	5
Measles	452	50	500	74
Diphtheria	126	55	126	58

The New York County Medical Association.—At the next meeting, to be held at the Carnegie Laboratory on Monday evening, December 20th, Dr. Frank Grauer will read a paper on the "Pathological Anatomy of Scarlatinal Nephritis."

The State Lunatic Asylum at Utica.—It is announced that Dr. G. A. Blumer, who for some time past has been one of the assistant physicians, has been appointed to succeed the late Dr. Gray as superintendent.

Society Meetings for the Coming Week:

Monday, *December 20th:* New York Academy of Medicine (Section in Ophthalmology and Otology); New York County

Medical Association; Roman Medical Society (private); Hartford, Conn., City Medical Association; Chicago Medical Society.

Tuesday, *December 21st:* New York Academy of Medicine (Section in Theory and Practice of Medicine); New York Obstetrical Society (private); Medical Society of the County of Kings; Ogdensburg, N. Y., Medical Association.

Wednesday, *December 22d:* New York Surgical Society; New York Pathological Society; American Microscopical Society of the City of New York; Medical Society of the County of Albany, N. Y.; Philadelphia County Medical Society (conversational).

Thursday, *December 23d:* New York Academy of Medicine (Section in Obstetrics and Diseases of Women and Children); New York Orthopædic Society; Brooklyn Pathological Society; Roxbury, Mass., Society for Medical Improvement (private); Pathological Society of Philadelphia.

Friday, *December 24th:* Yorkville Medical Association (private); New York Society of German Physicians; New York Clinical Society (private); Philadelphia Clinical Society; Philadelphia Laryngological Society.

Proceedings of Societies.

NEW YORK SURGICAL SOCIETY.

Meeting of November 22, 1886.

The President, Dr. Charles McBurney, in the Chair.

Note on Amputations for Joint Disease when Lung Tuberculosis co-exists was the title of the following paper, read by Dr. Lewis S. Pilcher, of Brooklyn: The frequency with which tuberculous joint affections are complicated with tuberculous diseases of the internal organs is such as to make the question of their mutual reaction one of importance. Willemer, in his report on the results obtained in tuberculous disease of the knee joint by Koenig at the Göttingen Clinic during the seven years ending October, 1882 ("Dtsch. Ztschr. f. Chir.," xxii, 3, 4; "Ann. of Surg.," ii, 1885, p. 514), states that, of 174 cases operated in, 15 per cent. of those in persons under ten years of age, 20 per cent. of those in persons between ten and twenty, and 37 per cent. of those in persons over twenty were complicated with tuberculous diseases of internal organs. Volkmann, in his address on tuberculous surgical affections, at the German Surgical Congress of 1885, said: "Local tubercular disease of other organs is associated far more rarely in children than in adults with fatally progressing lung tuberculosis. In an older individual having, for example, caries of the wrist, it is exceptional that he does not have or is not soon attacked by pulmonary tuberculosis." Vincent, of Lyons, in his article on Scrofulo-tuberculous Diseases of Bones, in the "International Encyclopædia of Surgery," vol. vi, p. 925, speaking of the results of a general scrutiny of patients affected with tuberculous osteitis or osteo-arthritis, says: "Too often there are found manifest signs of advanced pulmonary tuberculosis."

It is needless to multiply authorities or observations for the purpose of emphasizing the frequency of the coincidence of tuberculosis of internal organs with bone and joint disease of like character. The question which I wish to submit for consideration in the present note is, What modifying influence, if any, should the co-existence of an actively progressing lung tuberculosis have upon the operative measures which shall be adopted in the treatment of tuberculous joint affections? How is the lung tuberculosis likely to be affected by the operation upon the extremity? What disturbance in the repair of the operation wound in the extremity is likely to arise from the co-existent pulmonary trouble? Is it worth while, in the presence of an affection of an internal organ which with great certainty entails soon a fatal termination, to subject a patient to the traumatism required to rid him radically of a local affection of an extremity? A case in point is the following:

In January, 1879, nearly eight years ago, I was first consulted by a lady, then thirty-seven years of age, on account of slight lameness of the right knee. There was tenderness of the internal condyle of the femur on pressure, with some puffiness of the overlying soft tissues. In the preceding March she had slightly bruised this knee, the injury being so insignificant that it was not considered worthy of attention until the subsequent increasing lameness compelled attention. The patient's father and a maternal uncle had both died of tuberculosis pulmonum, and at the period of the injury and during subsequent years she herself was suffering a severe strain upon her constitutional vigor from domestic afflictions and deprivations. It was impracticable for her to give to the limb the rest required for its proper treatment, and I shortly lost sight of her. Three years later, in June, 1882, I saw her again, when she consulted me on account of persistent cough, with debility and loss of weight. Physical examination revealed a deposit at the apex of the left lung. Her knee was still troubling her somewhat, but she was able to walk about without any marked limp. In the interval that had passed she had had two attacks of acute synovitis of the affected knee. Under treatment, during the summer and autumn, a marked and progressive improvement in her cough and in her general health took place, but her lameness increased, with circum-articular muscular rigidity and nocturnal muscular spasms, followed by a renewed acute synovitis. Immobilization with extension was instituted, and finally, pus having been demonstrated with the aspirator, free incisions were made into the joint, and antiseptic irrigations used. The joint suppuration soon ceased under this treatment, the wounds healed, and, wearing an immobilizing apparatus, the patient was able to be around upon crutches during some months. An attempt to gain increased freedom of use was then followed by a renewed acute suppurative attack, which persisted despite antiseptic irrigations and drainage as before. The pain and loss of sleep combined with the discharge to sap the patient's general strength. Meanwhile the dormant pulmonary trouble was reawakened, and the general symptoms, as well as physical examination, indicated a rapidly progressing lung tuberculosis to be present.

In this case, the aggravated character of the suffering caused by the knee-joint affection, together with the depressing effect of the confinement to the bed which it rendered necessary, determined me, without hesitation, to still undertake a radical operation for the removal of the parts involved in the joint affection, despite the extent and activity of the lung disease. Perhaps the most important guide to the surgeon's action is to be found in what is suggested by the remark just made. Any possible remote unfavorable influence upon the lung affection that an operation might entail, or any possible disturbance of healing that might subsequently affect the operation wound, is thrown into the background by the more immediately pressing necessity of relief from the present suffering which the bone and joint affection is inflicting. In a condition such as I have described, the joint affection constitutes an acutely urgent condition the indications for the relief of which are of supreme importance.

Accordingly, in the case under consideration, I proceeded to operate in August, 1884. The joint was opened by the usual anterior semilunar incision, as for excision. The articular surfaces of both the femur and the tibia were extensively eroded, the crucial ligaments had disappeared, and the whole of the exposed surface of the femur was soft and friable. On attempting to apply the sharp spoon to it, the instrument passed, almost without resistance, for some distance up the shaft of the bone into a caseous mass. The evident tuberculous degeneration of the lower end of the femur was so extensive that complete removal of all the affected tissue by excision was out of the question. I therefore proceeded to amputate, making the section of the femur at about its middle. The local result was all that could have been wished. Healing *per primam* was effected throughout most of the wound; a single small sinus persisted for some weeks, but finally closed spontaneously. In three weeks the patient was able to leave her bed, and soon resumed the direction of her household affairs. The effect upon the lung tuberculosis was also very marked; the activity of its further progress was greatly hindered, the cough diminished, the appetite improved, and the general strength increased. Two years and a quarter have now passed since the amputation, and the patient is still living; though she is far from being a well woman, being distinctly tuberculous, with cough, dyspnœa on exertion, and general debility, no extension of her lung trouble has been manifested up to the present date. The stump is firm and symmetrical, and free from any signs of tubercular degeneration whatever.

In connection with this case, I would like to cite two cases which were embodied in a memoir by Dr. Mabboux, of Lisle, and commented upon by Dr. Chauvel, at the meeting of the Paris Surgical Society of February 10, 1886. In the first case, tuberculous caries of one of the metatarsal bones of a young soldier having been treated by resection, there followed synovitis of the peroneal sheath, and afterward suppuration of the tibio-tarsal articulation, with concomitant pulmonary tuberculosis. After three months, all the symptoms continuing to be more unfavorable, the foot was amputated. A rapid cure followed, the pulmonary symptoms abated and finally disappeared, and robust health was regained. In the second case, likewise in the person of a young soldier, suppurating knee-joint disease and beginning pulmonary tuberculosis existed. Arthrotomy was done, the pus was evacuated, the fungosities were removed, and the denuded bone was scraped. This was followed by redoubled suffering, probable meningitis, and more pronounced pulmonary symptoms. At the end of a month the pain was atrocious, the emaciation extreme, the exhaustion complete, and early death certain. At the earnest wish of the patient, in spite of the gravity of the condition, amputation of the thigh was done. There was great improvement for a month; then the stump ulcerated, fever reappeared, tuberculosis of the abdominal viscera declared itself, and finally death took place at the end of four months after the amputation, but with no recurrence of the atrocious suffering for which the operation had been performed.

In the discussion which followed M. Chauvel's report, a number of additional instances were adduced in which either apparent complete recovery from or great improvement in a lung tuberculosis had followed amputation for co-existing joint disease. All, however, were not ready to accept the tentative proposition of Chauvel, that local tuberculosis, as in osseous and articular affections, was to be considered as a neoplasm, the more malignant from its tendency to generalization, and to be treated under the same rules as sarcoma and carcinoma, and that early amputation was indicated whenever the extirpation of the disease in place was impossible, or when the anatomical conditions did not permit of the complete and certain ablation of all the infected tissues.

Without attempting any elaborate discussion of the many phases which are presented by co-existing lung tuberculosis and osteo-arthritic tuberculosis, the materials for which have amassed in great abundance during the last few years, I desire to close the present brief note with the following theses, which seem to be in accordance with present experience: 1. The probabilities of a spontaneous cure or prolonged abeyance of a tubercular bone or joint trouble as the result of expectant and palliative treatment—*e. g.*, by improved hygiene, rest, and counter-irritation—are much greater in children than in adults. 2. The probability of the presence or early development of lung tuberculosis in cases of tubercular bone and joint affections is much greater in adults than in children. 3. Incomplete operations, such as drainage and irrigation of joints, *évidement*, and resections in which all the diseased tissue is not removed, are less likely to be followed by ultimate good results in adults than in children. 4. Operative interference of a radical character is justifiable at an earlier date in the history of a bone or joint tubercular affection in an adult than in a child. 5. When a lung tuberculosis is present, and an operation for the relief of a co-existing bone or joint affection is indicated, as the result of such operation, the lung affection, while in some cases uninfluenced, is more frequently temporarily checked in its progress, and in some instances is apparently entirely recovered from. 6. Local relapse after operation for an osteo-arthritic tubercular disease, lung tuberculosis co-existing, is exclusively conditional on incompleteness of the operation—the fact that somewhere tubercular tissue escaped removal—and not on any influence exerted by the lung affection. 7. In any case of osteo-arthritic tuberculosis demanding operation in which a doubt exists as to the possibility of removing absolutely all the diseased tissue by the more conservative methods of arthrectomy or excision, the co-existence of a lung tuberculosis would be a circumstance that would add weight to the reasons for having recourse to the more radical operation of amputation. 8. After amputation in perfectly healthy parts, as prompt healing may be expected in persons suffering from lung tuberculosis as after such an operation in a healthy person. Relapses at the stump do not occur even in persons with advanced lung disease.

(*To be concluded.*)

NEW YORK CLINICAL SOCIETY.

Meeting of October 22, 1886.

The President, Dr. A. A. Smith, in the Chair;
Dr. B. Farquhar Curtis, Secretary.

Mollities Uteri.—Dr. C. D. Scudder read a paper with this title. [See p. 686.]

Dr. W. D. McKim asked if the symptoms detailed were not due to pelvic congestion, the latter being also the cause of the mollities uteri, and what the pathology of mollities uteri was.

Dr. Scudder replied that pelvic congestion was always accompanied by pain and tenderness, but that there had been neither in the cases described. As to the pathology of the mollities uteri, he was not yet ready to answer the question.

Dr. J. West Roosevelt had often, in post-mortem examinations, observed impressions of the intestine and other structures on the surface of the uterus, and the latter had seemed soft to the touch. In one or two of these cases, too, the presence of softening of the uterus had been noted in the clinical histories.

Dr. H. C. Coe thought the name was badly chosen, for the condition had been noted before, and was not primary, but secondary to other morbid states. In post-mortem examinations he had often found the uterus so softened that flexions could readily be produced, while the microscope showed no change whatever in the uterine tissue. He thought the change described was similar to that called subinvolution. When the uterus contained fungosities, it was frequently soft. He thought softening was sometimes due to over-nutrition as well as to malnutrition.

Dr. W. B. Anderton agreed with Dr. Coe with regard to the name. He thought softening was very rare in nulliparæ, and was usually secondary to other diseased conditions. He had found electricity useful in subinvolution, also ergot, strychnine, and quinine, given together.

Dr. J. H. Emerson thought Dr. Scudder's views were new. He was unwilling to admit that mollities uteri was a primary affection; certainly he had not recognized it as such in nulliparous women, but he should now look for it carefully.

Dr. Coe asked how pessaries could retain the uterus in position in these cases, for he should imagine that, by the tension they would exert on the vaginal vault, they would exaggerate the deformity.

Dr. Scudder replied that he had not intended to represent mollities uteri as a distinct diseased condition; but it was certainly different from subinvolution, for it occurred in nulliparæ, and with the finger the softening could be felt to be limited to the middle segment of the organ. Dr. Coe had referred to the difficulty of making the diagnosis in that way, comparing it to that of diagnosticating enlargement of the tubes and ovaries. But the speaker had not found the diagnosis of the latter so very difficult—in one case he and others had made the diagnosis of enlargement of the tubes and ovaries, but, during the month devoted to preparing the patient for oophorectomy, she had gained twenty pounds in weight, the enlargement of the ovaries and tubes had disappeared, and she was cured, at least for the time being. It might be that such cases as that had overthrown the faith of pathologists in the existence of tubal disease. As to pessaries, he had found by experience that they did hold the uterus in place, although he acknowledged the force of Dr. Coe's objection *a priori*. He had made a practice of recording in his history-book the curves of the uterine sound in these cases, and in one case he had this evidence to show alternate anteflexion and retroflexion.

Rhachitis.—Dr. Robert Abbe showed photographs of a girl, twelve years old, with great deformity of almost the whole body. The bones were so soft that the curve of the leg could be straightened without fracture. The muscles had rapidly become atrophied within the past year. The epiphyses were not enlarged, and there were no constitutional symptoms.

Cutaneous Horny Growths.—Dr. McKim presented some horny growths removed from the skin of the chest of a woman thirty-eight years of age, which had first been noticed during her childhood. There was no history of heredity, and there were no sebaceous cysts elsewhere. The growths were three or four in number, as large as beans or peas, and could be picked out of deep pockets in the skin, but always recurred. The speaker regarded them as originating in the sebaceous glands. Fearing cancerous degeneration, he had excised two elliptical portions of the skin, including all the diseased parts.

Dr. M. A. Starr asked if there were any intercostal-nerve symptoms.

Dr. W. Mendelson thought the growths could be referred to the inclusion of germ tissue during embryonic life.

Dr. McKim said that there were no nervous symptoms, and that he had not thought it necessary to invoke embryonic inclusion to account for the growths, for they seemed to him to have formed in the sebaceous glands.

Dr. L. Bolton Bangs had seen a real horn, as large as one's finger, composed of a conglomerate of epidermis and dirt, protruding from the navel, which was entirely covered in by the folds of abdominal fat, in a woman weighing three hundred pounds. It was easily removed.

Antipyrine Eruption.—Dr. Coe mentioned a case of this occurrence, in the second week of a typhoid fever, the eruption appearing suddenly, on the arms first, and resembling that of scarlet fever. The patient was taking a drachm of antipyrine daily, and the eruption had disappeared at once when its use was discontinued.

Antifebrin.—The President exhibited some charts showing the good effect of antifebrin in reducing temperature in doses only a quarter of that of antipyrine.

A Cure of Sterility after Hystero-trachelorrhaphy and Perinæorrhaphy was mentioned by Dr. B. Farquhar Curtis. Conception, after years of sterility, took place within three months after the operation, but, unfortunately, the patient miscarried in the fourth month, in consequence of anteversion of the uterus.

AMERICAN LARYNGOLOGICAL ASSOCIATION.

(*Continued from page 613.*)

Cases of Laryngeal Œdema were reported by Dr. T. Amory De Blois. [See page 673.]

Dr. S. Johnston: What was the internal treatment in these cases?

Dr. De Blois: Generally with astringents of different kinds; iron, tannic acid, and similar remedies. Where the syphilitic diathesis was present, iodide of potassium was given in large doses; but in all I used local treatment as in cases of simple œdema, for the symptoms were just as threatening, owing to the local obstruction, as in cases not syphilitic.

Dr. Donaldson: In such cases of acute œdema O'Dwyer's method of intubation is worth trying, and I would suggest it.

Dr. Delavan: I think that the suggestion has been already carried out by Dr. O'Dwyer. The pressure of the tube reduces the œdema of the mucous membrane, just as it sometimes does after tracheotomy. In such cases as these the introduction of the laryngeal tube is probably safer than tracheotomy.

Dr. Jarvis: In a case which came under my notice some years ago I gave the fluid extract of jaborandi, tentatively, with a view of producing diaphoresis, and thus causing absorption of the laryngeal effusion. The man returned the next day, entirely relieved, but whether it was due to the remedy or a coincidence I could not tell. Afterward I saw in a foreign journal that pilocarpine had been used successfully in laryngeal œdema. I therefore concluded that the patient was really benefited by the jaborandi. As regards the usefulness of scarification I have some doubt; I have never seen much good from scarification. A case bearing upon this I have already reported to the association, in which, after opening the larynx, I scarified the œdematous parts, but found that, unless the knife was passed in every direction through the mucous membrane, it did not relieve the swelling. There was no collapse of the walls like a bladder; but the serum was diffused through the cellular tissue.

Dr. Morgan: My experience with cases of œdema of the larynx, though limited, has been rather fortunate, the few instances which I have met with having been of a mild type and readily amenable to active therapeutic measures. My usual treatment embraces active mercurial purgation, the application of cantharidal plaster over the larynx, inhalations of conium, cannabis indica, or jaborandi, and pigments of silver nitrate, zinc chloride, etc., directly applied to the larynx. Scarification I have occasionally resorted to with good results, but have never found it necessary to perform tracheotomy for this trouble. I have recently seen a case of acute laryngeal œdema, occurring in a male patient, the subject of chronic nephritis, in which there was considerable ascites and anasarca. The ary-epiglottic folds, on laryngoscopic examination, were found enormously infiltrated, and well-nigh complete laryngeal stenosis existed. The respiration, which had been unimpeded a few hours before, was distressing to behold, and death from dyspnœa and asphyxia was imminent. The propriety of tracheotomy was considered, but I dissented therefrom, remembering the experience of my preceptor, Fauvel, in similar cases, which he has denominated "aphonie albuminurique."

Fauvel states that œdema of the bronchial tissues always precedes the invasion of the larynx in general dropsy, and hence a tracheotomy would be futile. My patient died from œdema of the lungs and larynx, the immediate result of a cold bath. In my opinion, tracheotomy in such a case would only hasten death, or perhaps prolong for a short period the misery of a hopeless case. So far as I am aware, the occurrence of laryngeal œdema in the course of the diseases commonly accompanied by general dropsy has been little studied.

BROOKLYN PATHOLOGICAL SOCIETY.

Meeting of April 22, 1886.

The President, Dr. B. F. Westbrook, in the Chair;
Dr. A. H. P. Leuf, Secretary.

Raynaud's Disease.—A paper on this subject was read by Dr. J. C. Shaw. [See page 676.]

A Microscopical Demonstration of Myelitis.—Dr. Albert Brinkman said the case that he was about to relate in behalf of the microscopical committee presented the ordinary history of myelitis. Nine months ago the patient had complained of some pain in the lower part of his back. Following this, his feet and legs had begun to tingle or feel as if they were asleep, and he had found a loss of power in the lower extremities. All this had occurred within forty-eight hours and without any assignable cause. There was no history of traumatism, syphilis, rheumatism, or exposure. The spinal column had no abnormal curvature, neither was there tenderness on pressure over any particular vertebræ.

He complained of a feeling as if there were a girdle around the waist. He had no control over the anal sphincter. The urine had to be drawn with a catheter, and gave evidences of cystitis. Priapism had been a prominent symptom in the early part of the attack, but was now lacking.

There was complete loss of sensibility below the lumbar region. The muscles of the legs had atrophied, and their electro-motility and electro-sensibility were very much impaired, showing but slight irritability with a strong current. The passage of a hot sponge along the spine gave no evidences of altered sensibility; the feeling of burning produced by that means, or by using a piece of ice in like manner, as pointed out by Brown-Séquard, was negative. Bed-sores developed, the paralysis extended upward, and the patient died of asthenia.

To look at a spinal cord affected with myelitis, and to distinguish it macroscopically from one possessing normal integrity, was a difficult if not oftentimes an impossible task.

The microscopical examination, however, would soon reveal the dilated blood-vessels, the extravasated red blood-corpuscles, disintegrated nerve-fibers and nerve-cells, corpora amylacea, etc. There could be seen the axis-cylinders of some of the nerve-fibers swollen and presenting the varicose appearance called fusiform hypertrophy. The ganglionic bodies would be found swollen, devoid of poles, the nuclei indistinct or absent, and the cells filled with granular matter. Sometimes the ganglia would be about to break up into sections; then again we should find them undergoing atrophy and disappearing.

In order to prepare sections from the spinal cord for the microscope, it was necessary to harden it in Müller's fluid, consisting of potassium bichromate, two parts; sodium sulphate, one part; distilled water, one hundred parts. The process was completed in eight weeks, but might be reduced to eight or ten days if an incubating oven was used maintaining a temperature of 40° C. (104° F.).

Erlitzki's fluid for hardening spinal tissue would answer the same purpose. It had the following proportions: Potassium bichromate, two and a half per cent.; sulphate of copper, one half per cent. Allowing the cord to lie in this for eight to ten days at ordinary temperature would suffice.

Great progress had been made in the methods of staining nerve-tissue by the introduction of Weigert's method. This brought out many points which theoretically should exist, but which it had not been possible to demonstrate with any degree of positiveness before.

Weigert's method was as follows: The sections before being stained must not come in contact with water, but must go directly from the microtome into alcohol. The staining fluid consisted of hæmatoxylin, one part; alcohol, ten parts; water, ninety parts. This was boiled and allowed to stand for a few days. The staining was best produced at 40° C. in one to two hours; then the sections should be washed in water. The deep black, greatly overstained cuts were then placed in a mixture of ferridcyanide of potassium two and a half parts, borax two parts, water one hundred parts, to remove the greater part of the stain. They remained in this for half an hour to one hour, until the gray matter appeared yellowish, the white substance retaining its dark color. Again the section was washed in water, put into alcohol, cleared up with xylol, and mounted in Canada balsam.

A transverse section of normal spinal cord and one from the case of myelitis were placed under the microscope, and attention was called to the difference in the ganglion-cells. In the normal specimen the nuclei stood out prominently with a clear central nucleolus, and close examination revealed the reticulum. On the other hand, in the pathological condition either there was a loss of the nucleus or it was rendered indistinct. The ganglia had become granular; they might also have lost their poles, and it was positively known that a ganglionic body possessing no poles, the so-called apolar cells of earlier writers, did not exist normally.

The origin of the medullary elements within the ganglionic bodies was given by Beyer as an endogenous growth from the bioplasm of the ganglionic body itself—*i. e.*, first the living matter was increased, giving the coarsely granular appearance. This living matter divided up into angular lumps, separated by a thin layer of fluid which was traversed by delicate conical offshoots, uninterruptedly connecting all the newly formed lumps with one another. Lastly, the whole ganglionic element and its offshoots might break apart into medullary or indifferent corpuscles, which, so long as they remained united by living matter, represented an indifferent medullary or inflammatory tissue. If the uniting offshoots were torn, these elements produced pus-corpuscles, and an accumulation of such corpuscles gave rise to abscess. It was true this logic had been applied by Beyer to inflammation in the gray matter of the brain surrounding an abscess, but the same deductions held good in inflammation of the spinal marrow, the tissue being analogous, the difference being not in texture but in situation.

In the normal specimen there was seen a light space around the ganglion-cell; this was the so-called peri-ganglionic space. It was absent in the section of myelitis, but this had no significance, as the space was thought to be artificially produced by shrinkage of the surrounding tissue. In the section of the inflamed cord the blood-vessels were found to be dilated and gorged with blood. The walls of some of the capillaries were thickened at some points and attenuated at others. In the healthy cord this appearance could not be found. The vessels contained very few blood-cells, their caliber was not increased, the walls preserved a uniform thickness, and the neighboring tissue was not infiltrated with the products of inflammation. In regard to the varicose condition of the axis-cylinders, it could not be seen with the power in use; in order to see it it required an expert and a power of 1,200 diameters.

Chronic Pericarditis Minus Symptoms.—Dr. Leuf presented a heart with its pericardium. The latter was extensively adherent to the heart, in some places by adhesions that were remarkably firm, and others that were easily broken down. In one place about half an ounce of greenish sero-pus had collected between the heart and its membrane, bounded on all sides by old and recent adhesions. In some places the visceral and parietal layers of the pericardium were very much thickened. In this case the disease had not been diagnosticated, and the only excuse for mentioning it was the total absence of symptoms that would call the attention of even alert and experienced diagnosticians to the seat of trouble. There had not been a suspicion of pericarditis in this case. It was instructive as showing the advisability of a thorough examination of all the organs in case of sickness, although attention was not called to them. Pathologists, who were almost proverbially circumspect in making positive diagnoses, were caused to become so by the frequent observance of cases similar to this.

Intestinal Invagination.—Dr. E. H. Bartley read the history and presented specimens of a case of intestinal invagination that had resulted fatally.

Book Notices.

Outlines of the Pathology and Treatment of Syphilis and Allied Venereal Diseases. By Hermann von Zeissl, M. D., Late Professor at the Imperial-Royal University of Vienna. Second Edition, revised by Maximilian von Zeissl, M. D., Privat Docent for Diseases of the Skin and Syphilis at the Imperial-Royal University of Vienna. Authorized Edition, translated with Notes by H. Raphael, M. D., Attending Physician for Diseases of the Genito-urinary Organs and Syphilis, Bellevue Hospital Out-patient Department, etc. New York: D. Appleton and Company, 1886. Pp. xii–402. [Price, $4.]

Medical science suffered a severe loss when, in September, 1884, Hermann von Zeissl died. Happily for us, this master in his chosen specialty had embodied the results of his vast experience in a text-book on syphilis and venereal diseases and published it some years before his death. The book now before us is a second edition of the former book, revised and in large part rewritten by Maximilian von Zeissl, and issued in the original some seven months before the father's death. It is a masterly treatise and thoroughly practical. We can commend it to all who are interested in venereal subjects.

We would specially note that von Zeissl is a dualist; that what he says about the treatment of stricture is meager, evidently because he does not wish to go into the domain of genito-urinary surgery; that he believes syphilis may be transmitted through the agency of the blood and seminal fluid; that syphilitic pemphigus in an adult is so rare that he has seen only one case in thirty thousand cases of syphilis; that a child may inherit syphilis from the father, the mother remaining apparently healthy, suffering only from latent syphilis at the most; and that Hutchinson's teeth are of not much significance.

The treatment of syphilis is given with great fullness, all methods being described. This section will be found of special value. The author believes that syphilis may end in spontaneous recovery, and that such cures are likely to be permanent; that the early use of mercury is more likely to entail obstinate relapses and grave cerebral and visceral lesions than the purely expectant plan. His plan is to treat the initial lesion by local applications alone; to give some form of iodine, such as iodide of sodium or iron, if after eight weeks the initial lesion has not disappeared and there is no perceptible improvement in the symptoms; if after eight weeks of the iodine treatment the disease has not entirely disappeared, he uses Zittmann's decoction and a few mercurial inunctions. Iodine is continued for a year after all symptoms have disappeared. He rarely gives mercury by the mouth, and does not use it hypodermically, as he has found the injections painful and no more efficient in preventing relapses than his own method of treatment.

Dr. Raphael has made a smooth and readable translation and has added much valuable matter to the book, adapting it to the use of American physicians. The chapter on galloping syphilis is entirely by him.

Wörterbuch der Bacterienkunde. Bearbeitet von Dr. W. D. Miller, Professor am zahnärztlichen Institut der Universität Berlin. Stuttgart: Ferdinand Enke, 1886. Pp. iv–43.

This pamphlet is a concise glossary of the commoner German terms used in bacteriological writings, together with the Latin names of the leading genera and species of pathogenetic micro-organisms, and a few French terms. The accuracy and sufficiency of the definitions, viewed from the laboratory standpoint, are very satisfactory, and in some instances the definitions amount to brief descriptions. The little work can not fail to prove of material assistance to students of bacteriology.

GENERAL LITERARY NOTES.

Among recent foreign publications we note the following:

Bell & Sons, London.—W. Sharp, "Therapeutics founded upon Organopathy and Antipraxy."

J. & A. Churchill, London.—Sir J. Fayrer, "Rules regarding Defects of Vision which Disqualify Candidates for Admission into the various Departments of the Indian Government Service." (2*s.* 6*d.*)

Maclachlan & Stewart, Edinburgh.—Henry, "Posological and Therapeutical Tables." New ed., revised by J. R. Hill. (2*s.*)

J. B. Baillière et fils, Paris.—P. Brouardel, "Le secret médical." (3*fr.* 50.) —— P. Girod, "Manipulations de botanique. Guide pour les travaux d'histologie végétale." (7*fr.*) —— J. Soury, "Histoire des doctrines psychologiques contemporaines." —— Jaccoud, "Nouveau dictionnaire de médecine et de chirurgie pratiques." Vol. xl. (10*fr.*)

O. Doin, Paris.—R. Jagnaux, "Traité de chimie générale analytique et appliquée." 4 vols. (48*fr.*) —— C. M. Gariel, "Traité pratique d'électricité, comprenant les applications aux sciences et à l'industrie, et notamment à la physiologie, à la médecine, à la télégraphie, à l'éclairage électrique, à la galvanoplastie, à la météorologie, etc." 2 vols. (24*fr.*) —— R. Duzéa, "Sur quelques troubles du développement du squelette dûs à des angiomes superficiels." (3*fr.*) —— G. Variot, "Éléments figurés du sang." (4*fr.*)

G. Masson, Paris.—Brodeur, "De l'intervention chirurgicale dans les affections du rein." (15*fr.*) —— É. Meyer, "Des maladies des yeux." 3d ed. (12*fr.*)

E. Plon, Nourrit et Cie, Paris.—Gilles de la Tourette, "L'hypnotisme et les états analogues au point de vue médico-légal." (7*fr.* 50.)

J. F. Bergmann, Wiesbaden.—E. Bumm, "Der Mikro-Organismus der gonorrhoischen Schleimhaut-Erkrankungen 'Gonococcus Neisser.'" (6*M.*)

Franz Fues, Tübingen.—H. Beck, "Zur Kenntniss der Entstehung der Herzruptur u. d. chronischen partiellen Herzaneurysma." (0·80*M.*)

Gressner u. Schramm, Leipsic.—W. Burckhardt, "Verbreitung der choleraseuche und ihre Ursachen." (0·80*M*.)

Alfred Holder, Vienna.—A. Borgherini, "Beiträge zur Kenntniss der Leitungsbahnen im Rückenmarke." (1*M*.)

Administración de la "Revista de Medicina y Cirugía Prácticas," Madrid.—A. Espina y Capo, "Enfermedades del Corazón." (15*pes*.)

BOOKS AND PAMPHLETS RECEIVED.

A Preliminary Draft of a National Formulary of Unofficinal Preparations. Presented by the Committee on National Formulary at the Annual Meeting of the American Pharmaceutical Association, held at Providence, R. I., September 7–9, 1886. [Reprinted from the "Proceedings," Vol. xxxiv.]

Description and Practical Demonstration of the Working of Roberts's Improved Electro-osteotome, New Electrical Illuminating Apparatus, and a New Form of Portable Storage Battery. By Milton Josiah Roberts, M. D., etc. [Reprinted from the "New York Medical Monthly."]

A Contribution to the Study of Tumors of the Spinal Cord. By B. Sachs, M. D., Instructor in Diseases of the Mind and Nervous System at the New York Polyclinic, etc. [Reprinted from the "Journal of Nervous and Mental Disease."]

Laryngology and its Cognate Studies in America, and The Simplest and most Efficient Treatment of Diphtheria. Two Papers. By W. H. Daly, M. D. Pittsburgh, Pa.

Conference of the American Shipping and Industrial League, held at Pensacola, Fla., November 10–12, 1886. Address on the Relation of Quarantine to Shipping Interests. By Joseph Holt, M. D., President of the Board of Health of Louisiana.

The Outbreak of Yellow Fever at Biloxi, Miss. Report to the Board of Health, State of Louisiana. By Joseph Holt, M. D., President, September 8, 1886.

The Physician's Visiting List (Lindsay and Blakiston's) for 1887. Thirty-sixth Year of its Publication. Philadelphia: P. Blakiston, Son, & Co., 1887.

Intubation of Larynx for True and Diphtheritic Croup. By W. Cheatam, M. D., Lecturer on Diseases of the Eye, Ear, Throat, and Nose, in the University of Louisville. [Reprinted from the "American Practitioner and News."]

Fifth Annual Report of the Hospital for Women and Children, Newark, N. J., together with the Certificate of Incorporation and By-Laws of the Board of Managers, November, 1886.

Report of Willis G. Tucker, M. D., Ph. D., Analyst of Drugs, to Woolsey Johnson, M. D., Chairman of the Sanitary Committee of the State Board of Health of New York.

The Climatology and Diseases of Southern California. By H. S. Orme, M. D., President of the State Board of Health. [Reprinted from the Ninth Biennial Report of the State Board of Health.]

The Diagnosis and Treatment of Diseases of the Kidney amenable to Direct Surgical Interference. By W. Bruce Clarke, M. A., M. D. Oxon., F. R. C. S., Assistant Surgeon to and Senior Demonstrator of Anatomy and Operative Surgery at St. Bartholomew's Hospital, etc. With Illustrations. London: H. K. Lewis, 1886. Pp. ii–176.

Reports on the Progress of Medicine.

OPHTHALMOLOGY.

By CHARLES STEDMAN BULL, M. D.

Cataract caused by a Stroke of Lightning.—Meyhoefer ("Kl. Monatsbl. f. Augenheilk.," Sept., 1886) reports a case of this nature occurring in a woman, aged thirty, who remained unconscious after the accident for twenty-four hours. The left side of the face and body, including both extremities, was swollen and reddened, but not burned. There was some diminution of power in the left arm and leg, and also in the speech. There was violent headache with general prostration for two weeks. She then recovered her general health and her speech. She at first complained greatly of photophobia and foggy vision, especially in the right eye. Three weeks after the accident she could read with the right eye. Twenty-four hours after the accident the attending physician had recognized cataract in the left eye. When Meyhoefer saw her there was ptosis of the left upper lid, also intense opacity of the anterior and posterior capsules of the lens as far down as the lower border of the pupil, while the remainder was clear. The fundus, after dilating the pupil, was found normal in both eyes. There was no sign of any wound in the capsule.

Anæmia of the Optic Nerve and Retina caused by a Stroke of Lightning.—Uhle (*ibid.*, Sept., 1886) reports a case of this kind occurring in a young woman aged twenty-two. She was marked by a broad punctate red line, running from the left temple down the entire left side of the body. This, however, disappeared on the fourth day. There was slight loss of power of the *right* side of the body, which soon passed off. The right eye was inflamed, there was ptosis and double vision. One month later, when she was examined, there was conjunctival injection of the right eye and there were slight vitreous opacities. Ten days later, when Uhle saw her, the media were absolutely clear and the retina and choroid normal in appearance, but the papilla of the right eye was of a dull, thick white, and the blood-vessels were diminished in caliber. Uhle considered it a case of anæmia of the optic nerve and retina caused by prolonged irritation of the sympathetic nerve. The prognosis he regarded as favorable, owing to the youth of the patient and to the fact that the color-sense was normal. Under the influence of inhalations of nitrite of amyl and instillations of eserine (one-per-cent. solution), the patient recovered completely in about a month.

The Pathological Anatomy and Pathogenesis of Glaucoma.—Birnbacher and Czermak ("Arch. f. Ophthal.," xxxii, 2) give conclusions based upon a careful microscopical examination of seven cases of glaucoma. The processes of degeneration and inflammation in the vicinity of Schlemm's canal, the ligamentum pectinatum, and the roots of the iris, can not be distinguished the one from the other, but they all lead eventually to partial or total obliteration of Schlemm's venous plexus and to adhesion of the sides of the angle of the anterior chamber. The peripheral adhesion of the iris is always the result of an adhesive inflammation of the angle of the anterior chamber, and is entirely analogous to the adhesions of serous membranes from inflammation. In almost all cases new-formed tissue is found between the anterior and posterior wall of the chamber, and this is prolonged over the anterior surface of the iris. In acute inflammation which has no tendency to tissue formation or to organization of its products, there is usually complete absorption of the exudation. They agree with Knies in employing the term "sclerosing inflammation of the angle of the anterior chamber" to designate these inflammatory processes in the anterior scleral zone. The atrophy which results from this inflammatory process has its origin in the defective nutrition which is caused by the obliteration of the vessels and destruction of the nerves in the adherent portions of the iris, and the less there remains of the tissue of the iris-periphery, the more pronounced is the atrophy. In some cases there is a perceptible thickening of the adventitia of the vessels, but there is never any hyaline degeneration of the vessels. In some instances there is loss of the endothelial lining of the vessels. All these signs point to a gradual cutting off of certain vessels from the circulation, and to a slow loss of the endothelial lining, due to an atrophy of the adherent portion of the iris. In most cases the inflammation begins in the uveal tract and extends to the sclera, but it is probable that in a minority of the cases the reverse is the case.

Some Considerations on Glaucoma.—Javal ("Ber. der 18ter Versamml. d. ophth. Ges.," 1886) reported a case of prodromal glaucoma in which the progress had been painless and the increase of tension slight before operation. Shortly after a perfect iridectomy had been done, the patient had a severe attack of pain and marked increase of tension, and the case ended in total blindness. The patient was markedly astigmatic, a very unusual complication, and there was no limitation of the field of vision. There was a diminution in the perception for red in central vision, which was quite marked.

The Mechanism of Rupture of the Choroid.—Franke ("Arch f.

Ophthal.," xxxii, 2) has been making some investigations into ruptures of the sphincter iridis and of the choroid, and formulates his conclusions as to the mechanism of the latter as follows: The cause of the rupture of the choroid is a stretching of the membrane whose margin lies at the papilla. The reason why the rupture does not occur immediately at the papilla is because the choroid is thicker here than it is farther away toward the equatorial region. The stretching of the choroid is a consequence, on the one hand, of the change of form of the globe by the blow, and, on the other hand, of the pressure of the vitreous acting from within outward, likewise the result of the blow. Another favoring factor is the stretching of the membranes around the entrance of the optic nerve by the driving backward of the globe. The reason why the retina is not ruptured also at the same time and place is that it offers but little resistance to the stretching except at one point immediately at the papillary margin, while the force which accompanies this stretching is not sufficient to rupture the nerve-fibers at this point.

Anophthalmus with Bilateral Congenital Cerebral Hernia.—Radziszewski ("Recueil d'ophtal.," August, 1886) reports a case of this nature in a child aged two months. The eyelids were closed, and between the tarsus of the lower lid and the margin of the orbit there is visible on both sides through the skin two whitish tumors. These were seen at the birth of the child, and have not increased in size. The edges of the upper lids with their lashes are rolled inward, while those of the lower lids overlie the upper lids. The inter-palpebral aperture is shorter than normal, and is with difficulty opened by means of the fingers. After dilating the apertures by Kramer's speculum, the conjunctival *cul-de-sac* looked like a pocket in which the two walls were closely adherent, and formed a sort of horizontal partition across the orbit. The internal surface of the lids was covered with normal conjunctiva. There was not a trace of the eyeballs on either side. The lower wall of the conjunctival pocket formed the upper surface of the tumors. These tumors were immobile on their base, smooth, soft, irreducible, and non-pulsating. There was no perceptible change of volume when the child cried, and even strong pressure upon them produced no cerebral symptom. The tumors occupied the lower part of the orbit. An incision made through the conjunctival covering so as to denude the tumors revealed a smooth, blackish, semi-transparent vesicle, without a trace of any ocular tissue. These vesicles contained fluid. A diagnosis was made of cerebral hernia.

The Astigmatic Contractions of the Ciliary Muscle.—Martin ("Ann. d'oculistique," July-August, Sept.-Oct., 1886) begins by stating that there are two varieties of astigmatic contractions of the ciliary muscle, which are destined to neutralize in part or wholly the asymmetry of the cornea. The first denotes a certain degree of tension of the muscle of accommodation. This contraction is permanent and rejects the cylindrical glass indicated by objective examination of the cornea; it only yields to a strong solution of atropia. The second variety indicates a lower degree of tension, is not continuous, and corrects more or less completely the asymmetry of the cornea. If the correcting cylinder for this asymmetry is employed, the contraction disappears, but reappears as soon as the lens is removed. The partial contraction which remains, even when the necessary cylinder renders it unnecessary, may be compared to the general contraction of the ciliary muscle which explains latent hypermetropia. Martin calls the contraction of the first variety "rénitente," and it answers to the dioptric value of the glasses. The other contractions he calls "elastic," because they act as elastic bodies, the form of which is changed whenever a temporary mechanical cause intervenes, and which assume their natural shape when this cause ceases to act. He reserves the name of "resisting" for certain contractions which only disappear after repeated and large doses of atropine. The method of recognizing the presence of a partial "resisting" contraction is to instill atropine into the eye of a patient who has an astigmatic cornea and who presents no trace of astigmatism at the time of the subjective examination, or else a lower degree to that of the cornea. In the first case the intensity of the contraction is indicated by the cylindrical glass accepted after atropinization; in the second case the dioptric strength of the cylinder which corrects the total astigmatism should be diminished by the number of dioptries representing the degree of manifest astigmatism.

The diagnosis of elastic contractions is delicate, demanding time and patience, but it requires neither atropine nor ophthalmometer, though the employment of the latter has the advantage of indicating immediately the persons who need to be carefully examined. The really necessary objects are a box of test-glasses and a stellate dial-card. Martin uses a dial composed of a circle of a diameter of 20 ctm., crossed by a series of twelve lines corresponding to the figures of the hours and half-hours on the dial of a clock. Each line equals in width the lines employed by Snellen in the construction of No. XX of his scale. The hour is indicated at the end of each line, and the degrees are also marked, the zero being at twelve o'clock, 90° at three o'clock, 180° at six o'clock. The patient is placed twenty feet from the dial, and, after correcting any myopia or hypermetropia that may be present by appropriate spherical lenses, he is asked whether he sees all the lines equally distinctly. Even when his answer is affirmative, the observer places cylinders of 0·25 D., both positive and negative, before the eye, with their axes according to indications previously given. If one of these lenses is accepted, it indicates that the eye is the seat of an elastic contraction which has ceased to exist, at least in part, owing to the presence of the cylindrical lens. In order to know the exact degree of this contraction, we must employ the cylinders in regular succession until the harmony in the distinctness of the lines is disturbed. The last cylinder, which produces no irregularity on the dial, indicates the strength of the elastic contraction. Where a line corresponding to one of the meridians appears sharply defined, the observer places stronger and stronger cylinders before the eye, until all the lines appear equally black. Note the weakest glass with which this result is obtained. Then place before the eyes the cylinders which immediately follow, until one is reached which makes the dial indistinct. The strength of the last glass with which the lines appear perfectly distinct, less the strength of the first glass which rendered all the lines equally distinct, represents with sufficient accuracy the degree of elastic contraction. In myopes the "resisting" contractions are rare and slight, while the elastic contractions are still more rare. Martin has never seen the elastic and the "resisting" contractions united in the same eye. In cases of myopic astigmatism the observer must learn to distinguish different forms of partial contraction—one variety, the result of which is to increase the myopia in the meridian of least myopic refraction; another more frequent variety, the result of which is to nullify the hypermetropic condition momentarily produced in the meridian of least refraction by a concave spherical glass too strong for this meridian. This last variety of contractions, which do not appear until their utility is called into play, merits a special name, and Martin therefore calls them "intermittent." The solution of atropine employed by Martin in his observations is 1 to 200, and usually within one hour after instillation of three drops of this solution the "resisting" contraction has entirely disappeared. Still this dose is not sufficient to render manifest within the short space of an hour the entire amount of astigmatism, and it is necessary to instill three drops of this solution several times within twenty-four hours to attain the desired end. In some subjects, moreover, the strength of the solution must be doubled and the frequency of the instillation increased before the correcting contraction is neutralized and the entire astigmatism revealed. Martin's experiments with a solution of homatropine sulphate (1 to 100) have never proved successful in neutralizing the correcting and contraction, and discovering the astigmatism. He found that cocaine acted in an astigmatic subject in the same manner as a weak convex spherical lens. If the astigmatism is corrected entirely by a "resisting" contraction, the cocaine does not reveal the slightest degree of correcting astigmatism. If, on the contrary, there exists an "elastic" contraction, then the cocaine reveals a darker line on the dial of the ophthalmometer. In persons who are subject to attacks of migraine, the instillation of atropine frequently brings on an attack of migraine. Partial ciliary contractions may return in young subjects. Martin draws the following practical conclusions from his observations: Lenticular astigmatism being, as distinguished from corneal astigmatism, in the great majority of cases a dynamical condition, which disappears under the influence of atropine, the use of the latter agent should be proscribed except for the subjective determination of astigmatism in a subject who complains of fatigue during work. The paralysis of the ciliary muscle leads to the prescribing of cylindrical glasses which are too strong for toleration. The patient needs merely the glass which corresponds to the manifest part of his anomaly. Moreover, before prescribing glasses, the objective exploration should always be followed by a subjective examination.

Ocular Asepsis and Antisepsis.—Samelsohn's paper ("Ber. d. 18ter Versamml. d. ophth. Ges.," 1886) is interesting as showing how much operative interference an injured eye will bear and still give favorable results. He reports one case in which a large splinter of iron had perforated the sclera and lodged in the vitreous. This was removed with the magnet, after enlargement of the scleral wound, and the prolapsed and torn retina and choroid were excised. The interior of the eye was then thoroughly washed out with sublimate solution, the scleral wound was closed, and a useful stump was obtained absolutely free from all signs of irritation. He reports a second case of a boy who had received an extensive laceration of the cornea, iris, lens, ciliary body, and sclera, which extended to the region of the equator. Some hours after the injury the child was brought to Samelsohn, who cleansed the wound with sublimate solution, carefully excised the injured iris, ciliary body and choroid, and the prolapsed vitreous, and removed by means of a hollow spatula all fragments from the interior of the eye. The eye was then carefully irrigated, the wound in the cornea and sclera closed with sutures, and the case was very rapidly healed, with maintenance of the shape of the eyeball, and the prospects of a fair amount of vision, after removal of the cataract by suction. Samelsohn thinks that, in the case of workmen and laborers, the smallest painless stump is always preferable to the insertion of an artificial eye. He always endeavors to preserve a moderate stump in all recent cases of injury, and to this end it is always his practice to disinfect every perforating wound of the eyeball as deeply into the anterior chamber and vitreous humor as is possible. He has found that the anterior chamber of septically infected eyes will bear with safety operative interference which could not at all safely be employed in a normal eye.

Transplantation of the Cornea.—Von Hippel (*ibid.*) at last reports a successful case of corneal transplantation. Since Leber's investigations it has been known that the endothelium of Descemet's membrane must be intact if the transparency of the corneal tissue is to be maintained. Destruction of this endothelium causes swelling and opacity of the overlying layers of the corneal parenchyma, and loss of the anterior epithelium from penetration of the aqueous humor into its tissue. If the loss of substance stops at the endothelium of Descemet's membrane, retrograde metamorphosis sets in, and the cornea regains its transparency; but if the pathological condition persists in Descemet's membrane, the cornea remains opaque. In all his previous cases von Hippel found that Descemet's membrane was rolled inward on both sides of the scar of union, and there was never any union of the wound-edges. Through these spaces the aqueous humor entered the corneal substance, and caused an opacity which gradually extended to the center, because the defect was not covered by epithelium. He therefore determined in his next case to trephine the entire thickness of a rabbit's cornea, and transplant it *upon* the membrane of Descemet of the patient's cornea. The successful case here reported was that of a young woman, aged seventeen, in whose right eye there was a large central leucoma of the cornea, from an ulcer occurring in childhood, which had been treated with lead lotions. There had been no perforation of the cornea, and the iris was freely movable. He removed with the trephine a piece of corneal tissue, 4 mm. in diameter, down to the membrane of Descemet, and then cut away all the opaque tissue with knife and forceps. The slight bleeding induced was controlled by iced sublimate compresses. A piece corresponding in size was then removed from the entire thickness of the rabbit's cornea, and inserted in the hole in the patient's cornea, which it exactly filled. The eye and *cul-de-sac* were then carefully cleansed with a sublimate solution, powdered iodoform was dusted in, and both eyes were closed by a bandage. The wound healed rapidly. A slight turbidity of the transplanted flap disappeared at the end of the first week. Some punctate losses of epithelium, which appeared during the second week, disappeared in two days. The corneal epithelium extended unbroken over the flap, and on the thirteenth day the bandage was permanently removed. Vision was then $\frac{20}{200}$, and eight months later the same amount of vision remained and the flap remained transparent.

The Influence of the Pressure of the Eyelids upon the Curvature of the Cornea and indirectly on the Refraction of the Eye.—Weiss (*ibid.*) has determined, from observations on patients, that in myopes the pressure of the eyelids through contraction of the orbicular muscles, which they exert in order to see better, causes an actual flattening of the cornea. Two of these cases he reports somewhat in detail, and both of the patients were able, by contracting the orbicularis, to diminish perceptibly the degree of their myopia. He examined them both carefully and made ophthalmometric measurements of the corneæ, and satisfied himself that the corneal radius was lengthened during the act of partial closure of the lids; in other words, the curvature of the cornea was perceptibly diminished in the horizontal meridian.

Subcutaneous Enucleation of Dermoid Tumors of the Eyebrow.—Rolland ("Recueil d'ophtal.," August, 1886) thinks that the ordinary operation of excision of dermoid cysts in the vicinity of the eyebrow and eyelids exposes the patient to the dangers of amblyopia, and even of amaurosis, through possible injury of the frontal and supraciliary branches of the fifth nerve. Basing his conclusions on three cases in his own practice, he asserts that the introduction of a metallic seton, after having first aspirated the tumor, renders the extirpation of the cyst possible without incising the tissues which cover it. Inflammation is set up in the cyst by the frequent traction of the seton through it, and eventually in the three cases mentioned the cyst-wall came away through the hole made by the seton; in two cases piecemeal, while in one case it came out entire. The advantages which he alleges for this method are as follows: 1. The introduction of a metallic seton causes less apprehension than an incision of the tissues. 2. It is much less painful, and in nervous individuals may be done under local anæsthesia. 3. There is less danger of wounding nervous filaments by the small point of a trocar, and hence less danger of a possible amaurosis. 4. The scars that are left after the seton-holes are healed are almost imperceptible.

Lymphangeioma of the Orbit.—Wiesner ("Arch. f. Ophthal.," xxxii, 2) gives the results of a microscopical examination of a tumor removed from the orbit of a woman aged forty-three. The tumor had been growing for about a year in the right lower lid. For two months there had been diplopia owing to paralysis of the inferior rectus. Between the eyeball and the lower-outer orbital margin was an oval, yielding, movable mass, as large as a hazel-nut, hard and smooth. There was no exophthalmus. A diagnosis was made of fibroma of the orbit. On November 13, 1885, an incision was made parallel to the lower orbital margin, and through this wound the tumor, which was found to have no adhesions with the orbital contents, was readily extirpated. It was 11 mm. long, 9 mm. wide, and 5 mm. thick, and showed a marked cavernous structure. It was inclosed in a capsule which contained loose fat and numerous blood-vessels, and in the fat-tissue were masses of lymphoid cells. The tumor itself consisted of a fibrous framework, filled with cavities of a varying size. The walls of these cavities were covered by a single layer of endothelial cells, with large nuclei. The framework consisted of fibrillar tissue of elastic fibers with many spindle-cells. The nuclei of these cells were of many shapes. Masses of lymphoid cells occurred all through the tumor. Many fissure-spaces existed independently of the other cavities, which sometimes opened into vacuoles still filled with lymphoid cells. The tumor was thus proved to be a cavernous lymphangeioma. These tumors originate from the presence of embryonal cellular tissue. Wiesner assumes that in this case, in some spot of the orbital cellular tissue which had hitherto no lymphatics, germs of the middle blastodermic membrane or embryonic formative cells were spontaneously developed. There is no characteristic clinical picture of cavernous lymphangeioma. It may be easily confounded with a fibroma or fibro-sarcoma of the orbit, and may not only originate primarily in the orbit, but involve the orbit secondarily by extending from some neighboring cavity.

Tumor of the Brain.—Hirschberg ("Centralbl. f. prakt. Augenheilk.," August, 1886) gives an account of the case of a young man who presented himself at the clinic, January 23, 1886. He had numerous brown, hairy "mother-marks" on the face and trunk, some of enormous size, which did not exist in any other member of his family. Three weeks before he applied for treatment the left foot became paralyzed, and eight days ago he began to see double. There were paresis of the right abducens and double choked disc, with very perfect vision. A diagnosis was made of brain-tumor somewhere in the vicinity of the right frontal lobe. The patient complained of vertigo, vomiting, disturbance of intellectual powers, and clonic spasms in the paralyzed foot. Weakness of the left arm appeared in February, and increase in the optic neuritis, though with but little disturbance of vision. In April he could no longer walk, the convulsions were more violent and lasted longer, he was at times unconscious, and his vision was markedly diminished. In May he was entirely blind, and there was rapidly increasing deafness. He became unconscious, and died July 18th. The autopsy showed diffuse brownish pigmentation of the frontal lobes, and a melanotic sarcoma as large as a hen's egg in the white substance of the right hemisphere in the posterior part of the frontal and anterior part of the temporal lobes. The sheaths of the optic nerves behind the eyeballs were distended with fluid, and the inner sheath was deeply pigmented.

Miscellany.

The New York Academy of Medicine.—At a special meeting, to be held Thursday evening, December 30th, Dr. F. H. Bosworth will read a paper entitled "Deformities of the Nasal Septum a Prominent Cause of Disease of the Upper Air-Tract; a New Operation for its Correction, with an Analysis of its Results in 150 Cases, as bearing especially on the question of the so-called Nasal Reflexes."

At the next meeting of the Section in Ophthalmology and Otology, next Monday evening, Dr. Albert H. Buck will read a paper on "Chronic Catarrhal Inflammation of the Middle Ear."

At a meeting of the Section in Theory and Practice of Medicine, next Tuesday evening, Dr. T. Munson Coan will read a paper entitled "The Therapeutics of Mineral Waters," and a discussion will take place on the question "Do Antipyretics as at present employed Modify the Duration or Mortality of Typhoid Fever?"

At a meeting of the Section in Obstetrics and Diseases of Women and Children, next Thursday evening, Dr. E. L. Partridge will read a paper entitled "The Use of Anæsthetics in Labor."

At a meeting of the Section in Laryngology and Rhinology, Tuesday evening, the 28th inst., Dr. D. Bryson Delavan will read a paper entitled "Tuberculosis of the Tongue."

The Pepsin War.—Under this heading the "American Analyst" gives an interesting sketch of the properties of pepsin and of the manner of its preparation, concluding as follows:

"The largest wholesale drug-house in the world, that of Gehe & Co., in Dresden, Germany, have placed the weight of their influence on the side of Jensen's by buying his product to the exclusion of every other. The courts thus far have decided in the same direction, but a practical test will still further decide the matter. The same writer we have quoted before has made a partial test by the methods he has indicated. We quote his results without giving names before giving the results of the tests made in our laboratory. It may be interesting in this connection to give a few of the results obtained by this process with some of the pepsins of the market. A so-called 'Turkey pepsin' leads the list. That is, it was found to be absolutely inert. Several samples of commercial pure pepsin were found, one grain of which would dissolve 500 to 700 grains of albumin, and one sample was found to digest 1,150 grains. This is the highest result I have ever obtained from numerous careful tests. One of the 'scale pepsins' of the market was found to dissolve 157 grains of albumin, while another sample from the same firm dissolved 350. In fact, there are just as many degrees of strength of 'concentrated' pepsin as there are lots made, since the same conditions can not always be met with in different membranes used. As regards all pepsins, I am inclined to think the manufactures of the United States are far ahead of those of Europe as regards digestive strength. These tests were all made in the laboratory of Eli Lilly & Co., Indianapolis.

"The tests made by the 'American Analyst' consisted of twelve samples of pepsin manufactured by six different firms. All of these were obtained at drug-stores, and, after being emptied into clean glass bottles, were numbered from 1 to 12, and handed to two different chemists without any knowledge on their part as to the maker of any of the samples submitted. Their reports are as follows:

"Number of grains of egg albumin in finely pulverized form dissolved by two grains of pepsin in six hours at a temperature of 100–103° F.:

"Sample No. 1	18	grains.
" " 2	19·7	"
" " 3	inert.	
" " 4	inert.	
" " 5	508	"
" " 6	506	"
" " 7	2,018	"
" " 8	2,007	"
" " 9	174	"
" " 10	336	"

"It is fair to add that specimens Nos. 7 and 8 were Carl Jensen's crystal pepsin."

Dr. John Ashhurst, Jr.—A reception in honor of Dr. Ashhurst was given by Mr. William H. S. Wood, of the publishing firm of William Wood & Co., on Wednesday evening, the 15th inst.

The Detroit Academy of Medicine.—A reception to the members was given by Dr. Leartus Connor on Tuesday evening, the 7th inst.

The Naval Medical Service.—In his annual report to the Secretary of the Navy, dated November 1, 1886, Surgeon-General Gunnell submits estimates for the fiscal year ending June 30, 1888. He then gives some interesting statistics concerning the insane in the navy. The condition of the Naval Hospital Fund is stated as follows:

Balance on hand October 1, 1885	$129,722 43
Transferred to the credit since October 1, 1885, by the Fourth Auditor	67,709 78
Credit by appropriation for fiscal year 1886–'87	30,000 00
Total	$227,432 21
Expended since October 1, 1885	63,649 94
Balance on hand October 1, 1886	$163,782 27

We make the following extracts from the remainder of the report:

Naval Hospitals.—"I am compelled to repeat the request for increased appropriation for the purpose of performing work that is necessary for the preservation and repair of the several naval hospitals. The station at Widow's Island has not yet been used to receive patients from infected vessels of the North Atlantic squadron, but is in good condition when needed. Plans for a permanent building at that place have been prepared, and I have to recommend that a suitable appropriation of money be made to begin the work."

The Medical Corps of the Navy.—"I have to invite your attention to the condition of the Medical Corps of the Navy. Its vacancies have not been filled for several years, resignations, deaths, and retirements having depleted it more rapidly than candidates have been obtained. The bureau has not been willing to lower the standard of requirements; and it is impossible, with the present inducements offered, to find young medical men possessing the necessary qualifications who are disposed to become medical officers of the navy. The Army Medical Department has qualified applicants far in excess of its needs, attracted by better pay, well-defined rank, and more satisfactory professional position. Since 1870 more than thirty young medical officers have resigned (three of them to enter the army corps); and I can not too strongly recommend that prompt measures be taken to increase the advantages and improve the condition of this department."

The Museum of Hygiene.—"The report of Medical Director Turner, in charge of the Museum of Hygiene, shows that the collection of sanitary and hygienic appliances has been increased during the past year by donation and purchase until the present building is completely occupied. More room is required for the interesting exhibit and for the increasing library.

"'The necessity for a building for the objects of the museum is apparent to any observer, and it is respectfully urged that the attention of Congress be called to this condition of affairs. Other countries have established institutions of like character, and the progress of sanitation in the United States, as presented in this museum, is creditable alike to the originality of the presented inventions and the object sought to be attained. . . . There has not been a day without some call for information, either from plumbers, architects, medical men, or others interested in the means of preventing dangers to health.

"'The chemical, physical, and biological departments of the laboratory have been steadily engaged. Analyses have been made, both chemical and commercial, of various proprietary disinfectants ; examinations of wood preservatives ; oils, presented to the Bureau of Steam Engineering, for lubricating purposes ; gas, air, and water analyses have been made, and tentative experiments have been conducted toward improving water analysis as well as to improving the methods of determining organic matter in the air.

"'In the physical department attempts have been made to define a standard by which to measure the relative viscosity of oils for lubricating purposes at determined temperatures, and also in colorimetry, as giving data for accurate measurements by instruments of precision.'

"Dr. Turner's report on recent advances in sanitary science will be published with the bureau's report for the present year. Mr. Glenn Brown has presented the results of the series of experiments on the important subjects of trap siphonage, etc., which he has been conducting for the past year at the Museum of Hygiene, in an interesting report, which will be soon published."

The Secretary of the Navy, in the section of his annual report that is devoted to the medical department, says: "The report of the Surgeon-General of the Navy shows the satisfactory condition of the Bureau of Medicine and Surgery. The business of the office is conducted with exactness and efficiency under the reduced appropriations of the year. I commend the request for the restored amounts of estimates under heads of Medical Department, Repairs, and Contingent of Bureau."

"The statement of the condition of the Medical Corps of the Navy, its reduced numbers, the frequent resignations of the younger medical officers, and the apparent inability to obtain desirable and competent men for that important service, is commended to the attention of Congress for such improvement in the advantages of that department as may be considered wise. It should not be less attractive and efficient than the corresponding department of the Army."

Pomegranate Root in Intestinal Affections.—Mr. Edward Nicholson, in a paper read before the Liverpool Medical Institution ("Liverpool Med.-chir. Jour.," July, 1886 ; "Practitioner," Nov., 1886), calls attention to some little-known properties of pomegranate root. His experience with it has been mostly with young children in India. He found that whenever a young child lost its appetite, had more or less irregular bowels and a somewhat tumid belly, was peevish by day and restless at night, when it was wasting, and the symptoms were negative as to worms or fevers, decoction of pomegranate root invariably effected a cure. The symptoms were mostly found in children about two years of age, but might occur at any time up to seven years. No particular dietary was found necessary. He has since found the drug equally efficacious in similar conditions in children in England. He has usually given the decoction in ounce doses three times a day, and has never seen any toxic effects from its use. In certain obscure diseases in adults, where there was cachexia with evidence of abdominal disturbance, he has also found the pomegranate root serviceable.

Eulylyptol.—This is the name given by Dr. Schmeltz ("Pharm. Jour.," Oct. 3, 1886 ; "Edinb. Med. Jour.," Dec., 1886) to a mixture consisting of six parts of salicylic acid to one each of carbolic acid and oil of eucalyptus, which he considers preferable as an antiseptic to iodoform, corrosive sublimate, or carbolic acid. He thinks that a chemical combination takes place between the ingredients, since carbolic acid can not be detected in the mixture. It is described as having a strong aromatic odor and an acrid burning taste, and as being nearly insoluble in water, but very soluble in absolute alcohol, in ether, in chloroform, and in a mixture of equal parts of alcohol and glycerin. It is also soluble in ammonia and in alkaline solutions. According to Dr. Schmeltz, it completely arrests the fermentation of all putrescible substances, a small quantity added to urine, under any condition, being sufficient to preserve it for a month.

The Health of Chicago.—According to the Health Department's "Condensed Statement of Mortality," for the month of November, the whole number of deaths was 1,077, including 1 from carbuncle, 8 from cholera infantum, 207 from croup and diphtheria, 2 from diarrhœa, 3 from entero-colitis, 2 from erysipelas, 5 from cerebro-spinal fever, 1 from remittent fever, 14 from scarlet fever, 52 from typhoid fever, 14 from typho-malarial fever, 8 from measles, 3 from pyæmia and septicæmia, 2 from thrush, and 6 from whooping-cough.

The Medico-chirurgical Society of German Physicians of New York.—At the recent annual meeting of this society the following officers were elected: President, Dr. L. Weber; vice-president, Dr. B. Scharlau ; recording secretary, Dr. W. Meyer ; corresponding secretary, Dr. H. J. Garrigues ; treasurer, Dr. A. F. E. Krog.

The New York Polyclinic.—Dr. R. C. M. Page has been elected to the professorship of diseases of the chest and general medicine in the Polyclinic. The appointment fills the chair made vacant by the resignation of Dr. Leaming, who, as professor emeritus, still holds the position of president of the faculty.

THERAPEUTICAL NOTES.

Dr. Oxley's Proposed Modification of the Compound Licorice Powder.—In our issue for October 30th we gave a formula proposed by Dr. Martin Oxley, of Liverpool, in the "Lancet." The object of the modification was to lessen the tendency to produce griping by substituting aniseed for the fennel, and by adding some ginger. An esteemed correspondent writes to us from San Francisco, expressing doubts as to the efficiency of the proposed change, and remarking that he has always thought senna was the offending ingredient. Our correspondent kindly incloses a note he has received from one of the foremost pharmacists of San Francisco, who makes the following tabular comparison of Dr. Oxley's proposed powder with that of the United States Pharmacopœia:

	U. S. P.	Oxley.
Senna	18	16·66
Licorice	16	16·66
Fennel	8	....
Anise	..	8·33
Sulphur	8	8·33
Sugar	50	48·00
Ginger	..	2·00

The change amounts practically, he remarks, to the addition of two per cent. of ginger, sugar to that amount being left out. He then says (addressing our correspondent): "I think the trouble with the compound licorice powder is partly due to the sulphur not being washed. If you want to administer it, I will prepare some for you specially with washed sulphur. If, after using that, you still find a griping effect, I would suggest that you try the addition of cream of tartar, which makes it a little pleasanter to the taste, and, I think, reduces or checks the griping."

Cannabis Indica and Belladonna in the Treatment of Whooping-Cough.—Vetlesen ("Pharm. Ctrlh."; "Dtsch. Med.-Ztg.") recommends the following formula:

Extract of cannabis	2 parts;
Extract of belladonna	1 part;
Absolute alcohol	10 parts;
Glycerin	10 "

For children between eight months and a year old, four drops are given as the dose; for those between one and two years, from five to eight drops; for those between two and four years, from eight to twelve drops; for those between four and eight years, from ten to thirteen drops; for those between eight and twelve years, from twelve to fifteen drops; and for persons over twelve years, from fifteen to twenty drops. Unpleasant effects are said not to have been observed, and it is added that experimental trials have shown that neither cannabis nor belladonna alone produces such favorable results as the mixture.

Lectures and Addresses.

ABDOMINAL ANEURYSM.

TREATMENT BY REST; RECOVERY.

FREQUENCY OF ANEURYSM IN CHARLESTON, AND IN THE COLORED RACE. CEREBRAL HÆMORRHAGE.

A Clinical Lecture delivered at the Charleston City Hospital.

By JOHN GUITÉRAS, M. D.,

PASSED ASSISTANT SURGEON, U. S. MARINE HOSPITAL SERVICE; PROFESSOR OF PATHOLOGY AND PRACTICE OF MEDICINE, AND OF CLINICAL MEDICINE, IN THE MEDICAL COLLEGE OF THE STATE OF SOUTH CAROLINA; FORMERLY PHYSICIAN TO THE PHILADELPHIA HOSPITAL.

Gentlemen: The specimen before you illustrates an advanced stage toward recovery in the course of abdominal aneurysm. An unfortunate accident enables us to see the successful result of a treatment instituted one year ago. Some of you remember this case. It was one of a series chosen to demonstrate clinically the effects upon different organs of slow connective-tissue inflammation with sclerotic and degenerative changes. The patient was presented to you as a subject of general atheroma and aneurysm of the abdominal aorta. He was then subjected to a plan of treatment which proved so successful that he was enabled to resume his duties as a nurse. I have had opportunities during the past year to observe his progress toward recovery.

Now, this patient, upon whose abdominal aorta our attention has been fixed for some time, was brought to the hospital at noon, speechless, apparently unconscious, with a frequent pulse, and a cold and clammy skin. The history was that these symptoms had come on suddenly during the morning of the same day. Under these circumstances you might be tempted to diagnosticate rupture of the abdominal aneurysm. But a glance at the patient was enough to avoid that error. Some of you had the good fortune to watch the very remarkable expression of his face. The eyes and the head were turned toward the left shoulder, and were held fixed in that position. At the same time, with each respiratory act, the cheeks were puffed out. This position of the eyes is called conjugate deviation of the eyes. It is a symptom observed with great frequency in severe cerebral hæmorrhage. The deviation toward one side is found, when it is an early manifestation, to indicate lesion of the opposite hemisphere. The lesion in this case was, therefore, of the right brain, while the consequent paralysis was of the left side of the body. This was further proved by a very simple procedure. The patient was asked to show the tongue. Now, an attempt, more or less futile, to respond to this request is often the only outward manifestation of remaining consciousness. The result of the patient's effort was striking. The muscles of the right side of the face contracted vigorously, and, those of the left side being paralyzed, the features were remarkably distorted. Further, the attempt was followed by an increase of the conjugate deviation, and a slight turning over of the body toward the left (paralyzed) side. At the same time the right arm was drawn slowly across the chest, and extended with the index-finger pointing to the left. This complex movement followed all attempts at protrusion of the tongue; the latter, however, never got beyond the teeth. Throughout this performance the left side of the body was entirely passive.

The evidences of paralysis were very manifest in this case. They excluded the question of a differential diagnosis between apoplectic coma and the coma of narcotic poisoning, of epilepsy, and of uræmia. And yet I shall not pass this question without some notice. Conjugate deviation points decidedly toward a sudden, more or less extensive yet circumscribed, destructive lesion of the brain. The lesion is generally a hæmorrhagic focus, or it may be the result of embolic obstruction of a cerebral vessel. It is important, however, for you to know that this symptom of conjugate deviation may occur under other circumstances. I have frequently seen it in uræmia, and occasionally in epilepsy, and in the convulsions that may occur in narcotic poisoning. But the form of deviation present in these cases differs from the one illustrated by our patient. In them the turning of the eyes and head is the result of a series of convulsive contractions which accompany a more or less general fit of clonic convulsions. In such cases the eyes and head are not held fixed in the peculiar position, but, on the contrary, they return to a natural position as the convulsion subsides. With a return of the fit the eyes are drawn again slowly across the field by a series of twitches which are more marked on the side toward which the eyes are deviated. This is a convulsive conjugate deviation, and can be readily distinguished from the spastic form represented in our patient. There is also a third form, the paralytic, which occurs, as a rule, later in the course of cerebral hæmorrhage, and differs from the earlier spastic form in the fact that the eyes are turned toward the seat of the lesion, and away from the paralyzed side.

Our diagnosis of cerebral hæmorrhage was further confirmed by the symptom of slight rigidity of the paralyzed muscles. Having satisfied ourselves of this conclusion, it still remained for us to exclude positively the diagnosis of abdominal hæmorrhage. This was easily done. In the first place, the pulse was beating 110, which is rather slow for a man dying from loss of blood; in the second place, the temperature, though subnormal, was not sufficiently so, nor did it show any tendency to become progressively lower, as would have happened in case of hæmorrhage from an aortic aneurysm; and, finally, an examination of the abdomen revealed the presence of the aneurysmal tumor unchanged. Had it ruptured, there would have been a collapse of the sac and an absence of pulsation.

Having concluded that there was an extensive hæmorrhage still going on into the substance of the right basal ganglia, I decided upon the following treatment: to withhold food, to keep the patient perfectly quiet, and to administer hypodermics of ergotin. I would strongly advise you to do nothing else in the treatment of the first stage of cerebral hæmorrhage. Even the ergot will probably be useless in the majority of cases, for neither it nor anything else (excepting time and the neighboring lymphatics) can take up the blood that has been already spilt into the cerebral substance.

Our patient died a few hours after admission. The autopsy revealed a hæmorrhagic focus which had its point of origin in the anterior tubercle of the right optic thalamus. The extravasation extended forward about half an inch into the body of the intra-ventricular nucleus of the striated body, and outward through the caudate prolongation of the same, to the inner half of the internal capsule. The cavity was filled with clotted blood. Its walls were jagged, and they had given way near the anterior extremity of the optic thalamus, pouring the blood into the cavity of the right lateral ventricle. This contained liquid blood and clots. The third and fourth ventricles, without having suffered any lesion of their walls, contained some bloody serum, which had run over from the lateral ventricle. The hæmorrhage had been caused by the rupture of one or more minute aneurysms. These had formed on the branches of the middle cerebral artery that enter the brain at the anterior perforated space, and more particularly on the branches of the lenticulo-optic artery.

You probably begin to understand that the apoplexy in this case can not have been a mere accident, but, on the contrary, that there must be a relationship of a common origin for both the cerebral and the abdominal aneurysms. This common ætiological factor is a degenerative inflammation of the walls of the blood-vessels: a periarteritis, as a rule, in the cerebral, and an endarteritis in the larger blood-vessels. Upon clinical grounds, however, you can not bring together apoplexy and aortic aneurysms. Though the arteries of the brain are frequently found diseased, and studded here and there with miliary aneurysms, in cases of idiopathic aneurysm of the larger vessels, yet cerebral hæmorrhage is, I believe, very rarely the cause of death in aneurysm of the aorta. Nor do you frequently meet with the latter condition in the course of hemiplegia.

Now, why is it that these two terminal consequences of arterial degeneration do not co-exist more frequently in the same case? I maintain that, though there is a common organic or vital basis for these two conditions, there is also a reciprocal antagonism, which we may term physical or mechanical, between them. Observe, for instance, what are the consequences of cerebral hæmorrhage. The patient is laid up for months with paralysis, the strain upon the aorta is brought to a minimum, its caliber is reduced, and the formation of an aneurysm is prevented. On the other hand, it will be found that, in the same manner, rest is enforced upon the cerebral arteries by the existence of large aneurysmal tumors, either through the advice of a physician or through fear, and by the aggravation of painful pressure symptoms that is brought about by all kinds of exertion.

I dwell upon these facts because they are illustrations of a great law in pathology—that every lesion brings with itself, as a part of its morbid physiology, the first essential of recovery, namely, rest of the affected part. Some of the best efforts of our art are based upon a knowledge of this law. For in these days of naturalistic revival (the natural always was the true) we are proud to acknowledge that our best treatment is in imitation of the natural processes.

Another beautiful illustration of the law just referred to is found in the history of hemiplegia. In patients recovering from this condition we find, as a rule, that the evidences of improvement show themselves first and advance more rapidly in the lower than in the upper extremities. This is recognized as of favorable omen. When, on the contrary, the upper extremity improves rapidly, the prognosis is unfavorable as to the recovery of motor power, and, in my experience, particularly unfavorable as to the repetition of the hæmorrhage and the duration of life. Let us see what happens when the lower extremity is recovering first. Remember that the movements of the leg are mostly automatic; that they frequently do not involve a larger circuit than the spinal centers. The number of volitional impulses passing through the affected region in the brain to the leg is, therefore, comparatively small. And we consequently have the maximum amount of rest about the lesion when the improvement commences in the lower extremities. If the hand, however, is recovering first, we have, as a result, constant exercise of volitional impulses, abuse of the returning power, resumption of business and of work, lack of rest and incomplete recovery, and a fatal renewal of the hæmorrhage in the affected region, because an increased afflux of blood is the necessary consequence of increased functional activity.

Now, are you to draw from all this the unsatisfactory conclusion that it is a mistake to treat abdominal aneurysms because you thereby expose your patient to the dangers of apoplexy? Not at all. You are to impress upon your minds the great importance of rest; and you must remember that the diseased arterial tree is sure to give way somewhere under the influence of increasing physical exertion, and either a new aneurysm may form or a rupture may occur, as in the present case:

Our patient was a short, wiry sailor, fifty-two years of age. He was born in Buenos Ayres, of a mixed breed of the white, Indian, and African races. He had been very intemperate, and had had rheumatism. There was no clear evidence of syphilis. I first saw him in March, 1885, nineteen months before his death. He then reported that he had been suffering for one year with a gradually increasing abdominal pain and a "stoppage" in his speech. The pain was paroxysmal. It was circumscribed to the abdomen, shooting through it in different directions, but not into the extremities. It was evidently a visceral neuralgia, which was frequently relieved by the discharge of flatus or the emptying of the bladder. The interruption of speech was brought about by a frequently recurring spasm of the diaphragm. The contraction was sometimes violent and painful. The pulse-waves were hard and flat, and there were other evidences of general atheroma.

On examination of the upper segment of the abdomen, I found a visible area of pulsation, an expansile tumor, more to the right than is usually the case, an area of dullness on percussion, a thrill, and a systolic bruit. The latter was heard distinctly over the tumor, and with difficulty at the corresponding level at the back. All these signs were apparent over an area the center of which was midway between the ensiform cartilage and the umbilicus.

It was recognized that to produce the peculiar hiccough the aneurysm must press upon the diaphragm or upon the cardiac orifice of the stomach. The size and position of the tumor as determined by physical exploration did not warrant this assumption.

I suspected that we had to deal with a so-called cirsoid aneurysm. This consists of an elongated tumor formed by a series of bulgings, which, winding around the vessel, give it the appearance of being spirally twisted. The post-mortem has explained this point more satisfactorily. You see we have here two aneurysms—one of them high up between the pillars of the diaphragm. This was, of course, inaccessible to physical exploration; but it probably gave rise to all the annoying symptoms by pressure upon the diaphragm and the solar plexus.

To return to the history of our patient. Toward the end of September, 1885, it became impossible for him to hold the position of nurse which he was filling. On the 9th of October I decided to submit him to a rigorous observance of the rest and diet treatment.

The object of the rest cure is to reduce to a minimum the amount of blood circulating through the vessel. This object is attained in abdominal aneurysms by diminishing the activity of the lower extremities as far as possible. For this purpose the patient is kept in a horizontal position for one, two, or three months. A reduction in the arterial pressure is also induced by this procedure. You see, this treatment is based upon the application of our knowledge of the importance of rest. Indeed, if we could only provide a comfortable cocoon for these patients, and place them in the condition of the dormant chrysalis, we should certainly obtain the most successful treatment for aneurysm. Something of the kind was attempted in our case by the use of the plaster-of-Paris jacket.

On the 9th of October I suspended the patient from the shoulders, allowing his feet to rest on the floor, so that the lines of the trunk, of the thighs, and of the legs formed two obtuse angles. I then applied a plaster-of-Paris bandage extending from the epigastrium to just above the knees. Two windows were cut out for the relief of the bladder and rectum. The patient was placed upon a fracture-bed. Surgical skill, I am confident, could make this treatment possible for a long period of time. My bandage, however, was very uncomfortable, and had to be removed on the tenth day.

Besides securing an initial period of absolute rest, the bandage had the following advantage: I doubt if I could have kept the patient upon his back, as I did for ten weeks, had it not been for the rather rough treatment of the jacket, the remembrance of which made the subsequent treatment appear in the shape of comparative comfort, and served also, to some extent, to show the gravity of the situation, and the earnestness of the endeavor to remedy it.

Tufnell has made restriction of the diet a special feature of his treatment of these cases. To this we closely adhered. As a rule, ten ounces of solid and eight of liquid food were allowed in the twenty-four hours. I choose at random and give you the bill of fare of the 16th of October.

For breakfast, two ounces and a half of chicken, two ounces of biscuit, and three ounces of tea and milk. For dinner, two ounces and a half of chicken, two ounces of bread and butter, and three ounces of wine and water. For supper, one ounce of bread and butter, one ounce of tea, and one ounce of wine.

This diet, of course, may be varied within the prescribed limits.

It is needless to say that this patient had been given the benefit of a thorough trial of various forms of drug treatment, especially with iodide of potassium. This generally gave some relief, but during the rest treatment it was found to disturb the bowels and to cause pain. Aconite and opium, in fact, seemed to be the only drugs that he could tolerate. It was a long time, however, before we could reduce the pulse from 100 to between 80 and 90. It was still more difficult to remove the hard and resisting quality of the pulse-wave.

When our patient was allowed to leave the bed he was very weak. The hiccough had almost entirely disappeared. The paroxysms of pain were scarcely perceptible. The expansile pulsation of the tumor had disappeared, though the impulse was still quite marked. The murmur I found could only be developed by pressure with the stethoscope upon the tumor. It was evidently a murmur produced not in the tumor, but in the channel of the vessel. On the 1st of February, 1886, the patient resumed charge of his ward. He failed to give satisfaction, and was discharged in May. After this he earned his living by making sails, until the present month of November, when he engaged again as a nurse. This occupation involved, in his case, the frequent carrying of heavy trays. At this time the hiccough had entirely disappeared, together with the pain and the habit of stooping forward to lean for support. The physical signs revealed the presence of a solid tumor in front of the aorta. You are already familiar with the consequences of this resumption of active life.

Let us look now more carefully at the specimen of the abdominal aorta.

We find two rather small sacculated aneurysms. The upper tumor springs, as you see, from the left side of the vessel, just above the opening of the cœliac axis. The sac is of the size of a large walnut. At the autopsy it was found to be filled by a firm, whitish, and partially laminated clot. You see I have succeeded in turning out a portion of this clot, exposing the wall of the sac, which is considerably thickened. The clot, then, did not form one tissue with the wall of the artery, but it is commencing to organize through the medium of connective-tissue formations. The second aneurysm is of about the size of a lime, and is seated just above the right renal artery. You notice the tumor is very hard. The inclosed clot is firm and whitish throughout, and, in some places, laminated. In others it is homogeneous, and is completely adherent to the wall of the sac, forming, in fact, one tissue with it. The diameter of the orifice of each aneurysm measures about two thirds of that of the corresponding sac. Through these orifices, of course, no blood was passing at the time of death.

The rest of the abdominal aorta is decidedly atheromatous. You see that the atheromatous plates are especially well marked in the front wall of the artery, between the point of origin of the inferior mesenteric and the bifurcation of the aorta.

Within the past year I have met with three cases of abdominal aneurysm, and two of them have been cured. The other successful case was under the care of Dr. J. J. Edwards, the chief of our surgical clinic.

The patient was a mulatto girl, aged twenty years, who showed slight evidences of general atheroma. She had never had syphilis nor rheumatism, nor had she followed any straining occupation. The tumor was sacculated and small, and seemed to spring from the anterior surface of the aorta, above the renal arteries. This patient was kept in bed for three months.

The doctor also gave daily doses of fifteen grains of iodide of potassium, but the diet was not restricted. The result has been a complete recovery.

There was one physical sign in this case of which the correct explanation has not been given. I refer to the double impulse felt over the tumor. When properly understood, this symptom becomes important as an indicator of favorable changes occurring in the aneurysm. These two impulses are not produced, the one by the erection and the other by the collapse of the tumor. The truth is that they are both systolic (cardiac time), and they follow one another rapidly. One is a transmitted impulse from the vessel—an impulse that may be felt over any tumor that rests upon an artery; and the other, or second, is produced by the expansile pulsation of the sac. The disappearance, therefore, of the second impulse signifies that the sac has filled with clots, and that the blood has ceased to enter its cavity. This was well exemplified in the case under consideration.

The third case was that of a sailor, white, aged thirty-six, native of Maryland, who refused treatment.

But these are by no means all the cases of aneurysm that I have seen during the past year. The frequency of aneurysmal disease in this city is astonishing. I shall give you the record of my observation in one year.

Of the patients with abdominal aneurysm, two were colored and one was white. Two were males and one was a female.

Case IV.—*Autopsy:* A mulatto, aged fifty-five years. Rupture of the aorta in the ascending portion, and dissecting aneurysm extending to thirteen centimetres below the origin of the left subclavian. Case of Dr. Edwards.

Case V.—An Italian sailor, aged twenty-seven years. Aneurysm of thoracic aorta in its lower third. Death by rupture into the pleural cavity.

Case VI.—A negro, aged twenty-five years, steamboat fireman. Aneurysm of the innominate artery. Death by pressure on the trachea.

Case VII.—A mulatto woman, aged twenty-one years. Atheroma of the arch and large fusiform aneurysm of the ascending and transverse portions. Death from rupture into the trachea. Case seen with Dr. Edwards.

Case VIII.—A colored woman, about fifty years old. Aneurysm of the right common carotid artery. Considerably relieved by the iodide of potassium. Case seen with Dr. Edwards.

Of these aneurysms, all but one developed in the city of Charleston. It is difficult to account for the influence of this locality upon the prevalence of aneursyms. Some may suggest the proximity to the sea; others will examine into the character of the food. The excessive use of fish and that of rice have been suggested in some places as causes of atheroma. But my experience in Key West will not bear this out. The same kind of food is consumed there, and yet I only saw two cases of aneurysm during my residence of four years on that island, though my field of observation was broader there than it is here. Of the two cases in Key West, one was in a Chinaman and the other in a negro. The former had an aneurysm of the right common carotid, and the latter one of the abdominal aorta.

The subjects of the ætiology and the treatment of atheroma will receive our special attention on some future occasion.

Original Communications.

DIAGNOSIS OF CONSUMPTION DURING THE FIRST STAGE.*

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I make no apology for bringing to your consideration to-night the subject of chronic tubercular consumption or phthisis, the oldest and most common disease with which we have to deal. I feel justified in so doing, because it prevails in New England to an alarming extent, and for the reason that we must recognize the disease early and act promptly if our efforts are to be of any avail. Hence I have come to look upon the early diagnosis of consumption as a matter of supreme importance, and feel it to be one well worthy of serious consideration upon an occasion of this kind.

In making an early diagnosis of this disease at a time when, bear in mind, physical signs are nearly if not entirely negative, the physician is obliged to base his judgment largely upon probabilities. Hence he must needs take into consideration such conditions as are known to predispose a person to consumption, and weigh the tendencies and evidences which are revealed in the history and appearance of the patient. As all of you are aware, family predisposition is chief among the conditions which render a person liable to this dread disease. This principle is so well established and so generally accepted that it needs no argument. I will, however, mention the following general rules which are well worthy of remembrance. In the first place, the offspring of consumptive parents are more likely to have the disease than others. Statistics show that twenty-five to thirty per cent. of all persons having consumption are born of parents one or both of whom died of the disease. In instances where both parents have thus died, the more likely is it to develop in their children, and the more rapid will probably be its course when once commenced.

Again, the hereditary tendency of a child as regards consumption is most likely to be after the parent it resembles in complexion and lineaments. But there are some authorities, on the contrary, who maintain that the disease is more inheritable from mothers than from fathers. In cases where there is a family predisposition to consumption it requires, as a rule, but a very slight exciting cause, like a bronchitis or pleurisy, to develop the disease.

Such are the accepted general laws regarding the heredity of consumption, and therefore, when we see a young person whose parents were consumptive, scrofulous, or weakly constituted, experiencing a decline in health, we must consider well the probable effect of his or her constitutional inheritance.

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* Read before the Portland Medical Club, February 4, 1886.

A second consideration which should always be given to a suspected case of consumption is the influence that has come to the patient from the nature of his or her occupation. It has always been observed that those of weakly constitution or of scrofulous temperament, who lead a sedentary life, are especially prone to the disease. It is believed that the deprivation of pure and fresh air, exclusion from the vitalizing influence of unobstructed sunlight, and the debilitating tendencies of indoor life, favor the development of the tuberculous tendency. Confirmatory of such theory, it has been repeatedly noted that consumption is most prevalent among those who work within doors, such as teachers, clerks, printers, hat-makers, tailors, cigar-makers, shop-girls, and factory employees of nearly every description. These facts are now well established all over the world, and hence the predisposing tendency of occupation is always worthy of consideration when an early diagnosis of consumption is being formed.

As a third important consideration aiding in diagnosticating incipient consumption, I will mention anti-hygienic conditions. Indeed, it is always imperative to ask ourselves whether or not the surroundings and habits of life which have environed our patient have been of a character to debilitate his or her constitution. We are justified in believing that they have, if we find that he or she has lived or worked in a cool, moist, poorly lighted atmosphere, has been exposed to the dangers of a badly ventilated and damp dwelling, or has lived mostly upon a diet which was deficient in nutritious elements. What relation a cool and damp house bears to tuberculosis no one can say; but what shall be our inference when we recall that such an atmosphere favors repeated "colds" and greater or less congestion of the various surfaces and structures within the chest? Whether or not such an atmosphere is especially favorable to the development of micro-organisms, which are now believed to cause tubercular disease, or whether it tends to cause those inflammatory or caseous degenerative changes which develop catarrhal phthisis, is a question to be settled by future observation.

As regards the influence of deficient diet, it has long been observed that the most of the cases of consumption are developed among those who are justly styled "poor feeders." Indeed, that class is most prone to the disease whose members, as a rule, are non-meat and fat eaters, and who live largely upon starchy foods in the form of bread, biscuits, pastry, beans, and potatoes. So certainly does a poor diet lead to poor health that the rule should always enter into the discussion of a case of suspected phthisis. There is no doubt that the tendency of such and similar anti-hygienic surroundings and defective diet is toward inducing feebleness of constitution, and hence predisposing to consumption.

From these brief references to influences which merit consideration because they impair the blood, enfeeble the constitution, and tend powerfully to develop disease, let us pass on to note the meaning of the peculiar appearance of the person who has made some advance in the first stage of consumption. As long ago as in the days of Aretæus the physiognomic appearance of the consumptive patient received great consideration, and that noted observer gave deserved attention to the details usually expressed in such cases. He wrote with great accuracy regarding the significance of the pinched face and bright, sunken eyes, the long, bent, and extended neck, the clubbed finger-nails, the loss of tension and rotundity of flesh, the shrinkage of the mammæ, the flat, narrow chest, the prominence of the ribs, shoulder-blades, and joints, all of which, in his estimation, denoted the "habitus depravatus" of chronic wasting pulmonary disease. Another sign usually present during the first stage of consumption is the depression of the supra- and infra-clavicular fossæ, a condition often caused by induration and shrinking of the apex of the lungs, and due primarily to infiltration and malnutrition. True, many have a flat and poorly developed chest and depression of the supra- and infra-clavicular fossæ without having consumption, but where there are predisposing causes and other probabilities pointing to the disease, this condition may be accepted as corroborating evidence. Another sign of special value discoverable on inspection is impairment of normal chest expansion and respiratory movement. As a rule, during even the first stage of the disease, the respiratory movement is feeble and increased in frequency from five to ten respirations a minute. This important change is due to obstruction of the bronchial tubes from mucus and pressure, and also to a decrease of area through which the blood is oxygenated. Another important alteration seen in the general contour of the patient is emaciation of the entire body. Emaciation is an early and very constant symptom of consumption, and is highly expressive of the consuming process which has insidiously fastened upon the unfortunate victim. While these physiognomic indications of the face and body are not invariable, they are sufficiently so to deserve attention in all earnest endeavors to form an early diagnosis.

Among the first pulmonary symptoms preceding or following the predispositions and physiognomy I have described, and which should tend to lead to a suspicion or diagnosis of consumption, are huskiness or hoarseness of voice and a cough. A history of "more or less hoarseness," "raising phlegm from the throat," or of "a dry, hacking cough" which has lasted for several weeks or months, accompanied, perhaps, by a decline in appetite, flesh, and strength, may be said to be always strong presumptive evidence of the first stage of tubercular disease. As a rule, the onset of such "coughs" and "throat troubles" is insidious, unless they follow right along after a bronchitis or a pneumonia, and are unheeded until they become decidedly more troublesome and attended with expectoration. Too often, indeed, they are said to be due to "irritation of the throat," or are "nothing but a bronchitis," and the patient is deluded into the belief that his trouble is insignificant, and that a cure awaits him. It should be borne in mind that, in the majority of instances, these "dry, hacking coughs" are the first symptoms of a bronchial irritation caused by incipient tuberculosis, and therefore well worthy of early consideration.

In regard to descriptions given by the patient which should make the physician suspect that there has been an insidious development of consumption, I beg permission to lay great stress upon the history of inflammations. It is safe to say that the advent of the disease is marked in nearly every instance by some acute inflammatory process—like bronchitis, pneumonia, pleuro-pneumonia, or pleurisy. Indeed, Niemeyer and some others regard bronchitis as the primary and essential developing cause in the majority of cases of consumption, but more especially of that form known as catarrhal phthisis. In instances where consumption thus follows a bronchitis or lobular pneumonia, it is believed that such result ensues largely because the patient was previously predisposed thereto, and, so to speak, was in a ripe condition for caseous degeneration and tubercular phthisis to follow. Again, it is equally certain that pleurisies of varying severity are, in many instances, the forerunners, as it were, of consumption. While it is true that most cases of pleurisy end in absolute recovery, it is equally true that the adhesions and thickening which form may sadly cripple the lung and become "the seat of tubercular development" in those predisposed to consumption. Consequently, pleuritic pains, so often complained of by those whom we suspect as tending toward consumption, are of decided importance. While in no sense pathognomonic, they are nevertheless present in many cases of the disease, and deserve most careful estimation. They are described as being sharp, "stitch-like," of varying severity, and are usually located just above or below the nipple anteriorly, or beneath or below the scapula posteriorly. It seems to me that they have been present in most every case of consumption I ever saw in its first stage, and I have come to look upon them, when associated with other symptoms or with a family predisposition, as being of great diagnostic significance.

Moreover, so-called "hæmorrhages from the lungs," but more properly bronchial hæmorrhage, so often complained of by patients in poor health, are in many instances indicative of tubercular disease, and may be about the first symptom which is manifested. In quite a large percentage of cases bronchial hæmorrhages are dependent upon bronchial congestion, or a mal-condition of the blood and constitution, which is destined to terminate in consumption. It is a symptom which more frequently occurs in the first stage of the disease than in the second, and is therefore of diagnostic importance at a time when inferences and probabilities, more than structural changes, must be the guide in making a diagnosis.

Hence, when a patient complains of a decline in health, strength, and flesh, and informs us, besides, that he or she has had "lung fever," or "cold on the lungs," or a bronchitis, pleurisy, or pneumonia, or hæmorrhage, let us be apprehensive that these insidious foes have left a legacy of evil import.

In the early stage of consumption there is also suggestive change in the rate and quality of the pulse which is worthy of notice. Its characteristic feature is a rise of from ten to twenty beats, with low arterial pressure. As a rule, the degree of its rapidity in incipient consumption is in keeping with the severity of the disease, so that if we find a pulse averaging from ninety to one hundred or upward, we may infer rapid progress. With the increased frequency in pulse ensues a significant elevation in temperature, giving rise to the fever which is considered inseparably associated with consumption. The fever is usually most marked in the latter part of the day or in the early evening, and is generally accompanied by a flush of the cheeks, hot and dry sensation of the hands and feet, and, in most instances, when it subsides there will appear more or less moisture of the skin, especially about the head and under the arms. The change in the pulse and temperature has a deep meaning, and should not be lightly estimated.

The physical signs which are appreciable during the first stage of consumption are, as a rule, negative or unsatisfactory. In fact, they are quite as often misleading as otherwise, because some place too much stress upon the importance of finding evidences of structural change. Some there are who, if they fail to find consolidation or an abundance of râles, fall into the error of attributing the cough and decline to some other cause, and therefore look lightly upon important tendencies and general symptoms. During the last three years I have seen several cases which were subjected to physical examination at the outset, and a diagnosis of "nothing but bronchitis" or "some little congestion" was given, when in reality there existed incipient consumption from which the patients died. When consumption is still in its first stage, we are able in some instances to detect by percussion some dullness at the apex, or over some circumscribed area of the chest, but quite as often the sounds are practically normal and of a misleading character. Of far more service are auscultatory signs, but these are highly variable, "being different in every case and variable in the same case." If, perchance, one is able to detect prolonged expiration, increased or exaggerated vocal resonance at the apex, or harsh respiration or tubular breathing in the same region, and more or less small mucous or subcrepitant râles, enough has been found to aid very much in forming an accurate diagnosis. Let us not, however, depend too much upon the presence or absence of these well-known signs, but rather simply give them their due consideration in the ensemble of symptoms which the case presents.

Lastly, having considered the predisposition, and also the chief symptoms and signs presented by one thought to be in the first stage of consumption, confirmatory evidence of the greatest reliability can be obtained by a diligent use of the microscope. Since the distinguished Dr. Koch announced the discovery of a micro-organism, now known as "the tubercle bacillus," which he found to be present in cases of tuberculosis in man, monkeys, cattle, and other animals, we are enabled by a few microscopic examinations of the sputa to state almost absolutely whether or not a patient has consumption. The accuracy of his great discovery has been tested in every possible way and in different portions of the world, and now the revelations of the microscope, when managed by a competent examiner, are looked upon as being practically infallible. Besides being thus accurate in the highest degree, the physician is enabled by this method of investigation to obtain positive information whether or not a patient has tuberculosis, at a time when nearly all symptoms and signs are doubtful and unsatisfactory. In proof of this statement, let me say that the bacilli of tubercle have been found in the sputum of tuberculous patients at a time when expectoration followed simply a tickling in the throat, and when symptoms and physical signs were almost too slight to be appreciable. In an obscure case which came under my care last July, and which had been pronounced bronchitis, and so treated, bacilli were found in the sputum and the diagnosis was changed to consumption. Afterward a case of incipient consumption, so obscure that two good and regular physicians had diagnosticated it "bronchitis," also came under my observation. In my investigations I submitted a specimen of the sputum for microscopic examination, and bacilli were found in great numbers. On the strength of the few general signs and symptoms present, and the revelations of the microscope, I changed the diagnosis to consumption. In verification of the accuracy of the microscopic examinations, I will say that both patients have since died of well-marked tuberculosis. Useful and indispensable as the microscope is in diagnosticating the diseases of the kidneys, I believe the time is to come when it will be of incomparably greater service to the physician by revealing to him the nature of the diseases of the lungs at a time when much can be done to counteract tuberculous disease if found to be present.

AIKEN AND THOMASVILLE

AS TYPES OF THE INLAND HEALTH-RESORTS OF SOUTH CAROLINA AND GEORGIA.*

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During the winter of 1885–'86 I was requested by a committee of the American Climatological Association to prepare a paper on the inland health-resorts of South Carolina and Georgia, to be read at the annual meeting in May. On investigating the matter, I found that Aiken and Thomasville were the only places for which I could obtain the requisite meteorological data. This, and the fact that the other localities considered to be health-resorts were comparatively unimportant, induced me to devote my whole attention to the above-mentioned resorts, one of which has been known to the profession for over thirty years, while the other has sprung into existence as a health-resort only within the past six or eight years. As regards temperature, there is but little difference between the resorts in the interior of the South Atlantic States and those on the coast, the interior being about two degrees colder. Thus, the mean annual temperature on the coast of South Carolina and Georgia is 67°, while that of the inland stations is 65°. But with this similarity of temperature all resemblance ceases, the coast, as one would naturally expect, being moist and sedative, while the interior is more or less dry and bracing. Hence the former is indicated in bronchitis when the cough is dry and tight and attended with little or no expectoration, and in all diseases where there is great irritability of the nervous system. The interior resorts, on the other hand, are better suited for the treatment of diseases of an asthenic type, and are especially beneficial in pulmonary phthisis; but to all of this I shall again refer in another portion of this paper.

Topography, etc.—Aiken is located on the southern border of what is known as the Sand-Hill region. It is about 565 feet above sea-level, and is the highest point within a radius of a hundred miles. It is 120 miles west of Charleston and 17 east of Augusta. Thomasville is about 100 miles farther south, a little north of the Florida line, in what is designated on the agricultural maps of the "Tenth United States Census" as the region of the long-leaf pines. Its altitude is 330 feet, and is therefore 235 feet lower than Aiken, but, like the latter place, it is much higher than the surrounding country. It is about 150 miles from the Atlantic Ocean and 60 miles north of the Gulf of Mexico.

The Sand-Hill region in which Aiken is situated is a tract of sandy soil of moderate elevation and about twenty miles in breadth, extending through the middle portions of South Carolina and Georgia. Commencing in Chesterfield County in the northern border of the former State, it extends in a southwesterly direction until it reaches the Savannah River at Augusta. Reappearing on the other side of that river, it crosses the State of Georgia in the form of a narrow strip which terminates on the western border of the State. Consisting, as its name implies, chiefly of fine loose sand, this region in its natural state is so utterly worthless for agricultural purposes that it well deserves to be called the "pine barrens," the name applied to it by many of the natives. But, although naturally so unproductive, the soil of this region contains a certain proportion of clay which makes it very retentive, so that, by the addition of fertilizers, it may be made to produce valuable crops of cotton and other products. The subsoil of this region is very porous, and water is rarely found at a depth of less than 80 feet, and often it is necessary to dig 150 feet before it is reached. Owing to the porosity of the soil, water disappears rapidly from the surface, so that even the heaviest rains interfere but little with the out-door life of the invalid.

The inhabitants of Charleston and the planters of the counties along the coast were long ago familiar with the extreme salubrity of this favored region, and, as soon as the South Carolina Railroad was completed, hastened to avail themselves of Aiken, not only as a sanitarium for consumptives, but also as a place of refuge from the deadly malaria (bilious remittent or country fever) which rendered their estates uninhabitable during the warmer months of the year. As a proof of the healthfulness of the Sand-Hill region, it is stated in the "United States Census for 1880"* that at Platt Springs, a little hamlet in the adjoining county of Lexington, there were in 1879 but two deaths out of a population of 853, and in 1880 only four, and that of these, three of the decedents were over eighty years of age. The sandy soil of this section, as well as that around Thomasville, is covered with forests of the long-leafed pine (*Pinus australis*) and black-jack oak. The former is remarkable for the large amount of resin it contains, and it is the "lightwood" of this tree which affords the bright, cheerful fires which are so attractive to the Northern invalid. Whether these trees, by generating ozone or peroxide of hydrogen, really add to the purity of the atmosphere, is still an open question, but it is quite certain that the terebinthinate exhalations from the pine forests around Aiken and Thomasville are exceedingly grateful to pulmonary invalids. Although we may not be able to offer any satisfactory explanation of their physiological action, there can be no doubt that the presence of large tracts of pine forests add materially to the therapeutic value of a health-resort. In common with all forests, they afford protection against the wind, but in addition to this, for some hitherto unexplained reason, the air of the pine woods is apparently warmer than that of forests of oak and other trees. This is so marked that, on driving through the country on a cold winter day, the entrance into even a comparatively small thicket of pines gives rise to a sensation of warmth similar to that which is experienced on going from the cold outside air into a comfortably heated apartment. Hermann Weber* states that he has often known tender exotics growing in a forest of firs to remain uninjured by the severe cold of winter when those in more open situations in the same neighborhood were destroyed.

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* Read before the American Climatological Association at its third annual meeting.

* "Tenth Census of the United States," vol. vi, p. 90.

A wooded country is much more equable than an open plain, a fact which applies to humidity as well as to temperature. Absence of dust, with its injurious effects upon the mucous membrane of the respiratory tract, is another advantage which the presence of pine forests confers upon a health-resort. Eliot and Storer remark in their work on organic chemistry that "the disinfecting power of ozone produced by the action of the atmosphere on turpentine is interesting in connection with the observed facts, that ozone is abundant in the air of pine forests where turpentine abounds, and that pine forests are remarkably free from malaria." This protection against malaria afforded by pine forests has long been known to the rice planters of the coast of Georgia and South Carolina, who, during the summer, as night approaches, retire to their pine-land settlements, and find there a safe refuge from the deadly poison which pollutes the air of the surrounding country and makes it extremely dangerous for a white man to remain there after nightfall.

Some twenty miles from Charleston is the pine-land village Summerville, which, although located in the midst of the malarial belt, is so healthy that hundreds of families from the city utilize it as a summer resort, and so great is the faith of the inhabitants in the immunity afforded by pines that a heavy fine is imposed for cutting down one of these trees without the permission of the Municipal Council. From the above we arrive at the following conclusions in regard to the influence of pine forests upon the climate of a locality—viz.: That they render the temperature and humidity more equable; that they afford protection against high winds; that in winter they are warmer than the open country; that by generating ozone or peroxide of hydrogen they disinfect the air; and that to some extent their terebinthinate exhalations moderate the amount of secretion from the mucous membranes of the air-passages, and thus exercise a curative influence in bronchial catarrh.

I have dwelt at some length on the subject of pine forests, as I believe that their presence adds materially to the usefulness and attractiveness of a health-resort in this section of the country. They are said to be much more extensive at Thomasville than at Aiken, where, owing to the great demand for land for agricultural purposes and to the absence of all laws for their protection, they have been every year most recklessly destroyed. They are, however, still quite numerous, and steps are being taken to prevent their wanton destruction and to encourage the planting of new trees.

Meteorology.—As the limits of this paper preclude any detailed discussion of the various elements which, when taken together, constitute climate, I have prepared a series of tables, by referring to which the reader can compare at a glance the climate of Aiken with that of Thomasville, and thus be enabled to form his own opinion in regard to the merits of the two resorts, and determine which of the two places is best adapted for the class of cases he may conclude to subject to climatic treatment. With this view I have compiled two tables for each of the more important meteorological factors, such as temperature, humidity, etc., the first giving a general summary of a series of observations extending over a number of years, and the other a record of tri-daily observations made during March and April, 1886, at both places and at the same hours. For the later observations at Thomasville I am indebted to Dr. W. R. Birdsall, of New York, and Dr. W. S. Little, of Philadelphia. These gentlemen were prepared with a book of instructions issued by the U. S. Signal Service and a set of instruments from the same bureau, the latter being in every respect similar to those used at Aiken. These observations were taken with the most scrupulous care, and, although covering only a limited period, are of inestimable value.

Much to my regret, the Thomasville observations extend over only four years, while those of Aiken cover a period of eleven years. I applied to Dr. T. S. Hopkins for the more recent observations, but was refused on the ground that the unpublished meteorological data were the property of Dr Huntington Richards, one of the collaborators of Wood's "Reference Hand-book of the Medical Sciences." So far as temperature is concerned, the absence of the two additional years is a matter of but little importance, the difference between those given above and the more extended series amounting to but one degree. For those given I am indebted to Dr. Hopkins's pamphlet, "Thomasville as a Winter Home for Invalids."

The following table gives the mean temperature of Aiken and Thomasville during the six colder months, and the mean temperature of the months and seasons.

On examining the table, it will be seen that the mean temperature of the six colder months is about five degrees colder at Aiken than at Thomasville, the difference in winter being five and in spring four degrees.

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* H. Weber, "Klimatotherapie." Ziemssen, "Allgemeine Therapie," Leipzig, 1880, p. 62.

Table No. 1.

Comparing the mean temperature of Aiken with that of Thomasville. Period of observation at Aiken, eleven years; period of observation at Thomasville, four years.

	Aiken.	Thomasville.	Aiken colder than Thomasville.
	Degrees.	Degrees.	Degrees.
November	54	59	5
December	47	53	6
January	48	54	6
February	50	56	6
March	56	62	6
April	66	67	1
Six colder months	53	58	5
Winter	50	55	5
Spring	57	61	4

The observations at 7 A. M., 2 P. M., and 9 P. M., although not as accurate as the readings of the maximum and minimum thermometers, afford a fair idea of the highest and lowest temperature of the different months, and are of more importance in forming an estimate of the extremes of temperature to which the invalid is subjected. It would be obviously unfair to estimate the average winter at Thomasville and Aiken by the low temperature which prevailed during the early days of January of the present year, which, judging from its effects upon vegetation, is considered the coldest ever experienced during the last two hundred years.* The average range of temperature, as given in the third column, is very moderate for a dry climate like that of Aiken.

Table No. 2.

The mean temperature of Aiken at 7 a.m., 2 p.m., and 9 p.m., with the average daily range from 1873 to 1884.

	7 A. M.	2 P. M.	9 P. M.	Range.†
	Degrees.	Degrees.	Degrees.	Degrees.
November	49	61	53	12
December	42	54	47	12
January	42	54	48	12
February	43	57	50	14
March	49	64	56	15
April	57	71	63	14
Six colder months	47	60	53	13
Winter	44	56	49	12
Spring	49	64	56	15

The following table requires no comment, but is exceedingly useful as a supplement to Tables Nos. 1 and 2. It shows that the means of the month of February, 1886, at both places correspond with the average given in Table No. 1. During the ensuing month (March) the temperature was seven tenths of a degree lower at Aiken, and three and a half degrees lower at Thomasville. During the two months Aiken was, on the average, only three degrees colder than Thomasville. The average range during February was thirteen degrees and five tenths at Aiken and fourteen degrees and seven tenths at Thomasville. During March it was fourteen degrees and three tenths at Aiken, and nine degrees and four tenths at Thomasville. To enable the reader to compare the temperature of Aiken and Thomasville with that of other places I have compiled the following tables, giving the mean temperature during the six colder months at some of our principal cities, and at the most generally known health-resorts in this country and abroad:

Table No. 3.

Temperature observed at Aiken and Thomasville from February 8 to March 31, 1886, at 7 a.m., 2 p.m., and 9 p.m.

1886.	7 A. M.		2 P. M.		9 P. M.		MEANS. ¼7+2+9+9		Difference between Aiken and Thomasville.
	Aiken.	Thomasville.	Aiken.	Thomasville.	Aiken.	Thomasville.	Aiken.	Thomasville.	
	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.
Feb. 8..	42	48	61	66	53	51	52·2	54·0	Aiken 1·8 colder.
" 9..	43	45	63	63	58	53	55·5	53·5	" 2·0 w'rmer
" 10..	55	58	68	72	62	62	61·7	63·5	" 1·8 colder.
" 11..	51	55	54	74	53	62	52·7	63·2	" 10·5 "
" 12..	52	57	56	61	46	48	50·0	53·5	" 3·5 "
" 13..	36	40	52	60	44	48	44·0	49·0	" 5·0 "
" 14..	47	48	63	70	58	57	56·5	58·0	" 1·5 "
" 15..	50	56	68	73	51	60	55·0	62·2	" 7·2 "
" 16..	32	42	48	60	42	46	41·7	48·5	" 6·8 "
" 17..	34	41	46	59	40	48	40·0	49·0	" 9·0 "
" 18..	38	46	54	50	42	50	44·0	49·0	" 5·0 "
" 19..	45	52	58	70	52	56	51·7	58·5	" 7·2 "
" 20..	31	45	40	52	35	38	35·2	43·2	" 8·0 "
" 21..	27	31	52	60	48	53	43·7	49·2	" 5·5 "
" 22..	42	52	62	70	53	54	52·5	57·5	" 5·0 "
" 23..	48	49	66	72	59	54	58·0	57·2	" 0·8 w'rmer
" 24..	45	53	64	73	58	58	58·7	60·5	" 1·8 colder.
" 25..	60	62	62	70	57	63	56·5	64·5	" 8·0 "
" 26..	40	51	53	59	45	50	44·2	52·5	" 8·3 "
" 27..	35	47	45	50	35	50	38·7	49·2	" 10·5 "
" 28..	33	45	36	49	37	47	35·7	47·0	" 11·3 "
Mean of 28 days.	42·1	48·7	55·6	63·4	48·5	52·8	48·9	54·4	Aiken 5·4 colder.
March 1.	36	46	59	57	49	54	48·2	52·7	Aiken 4·5 colder.
" 2.	38	51	55	61	51	60	48·7	58·0	" 9·3 "
" 3.	37	44	52	57	48	60	46·2	55·2	" 9·0 "
" 4.	39	48	48	48	44	46	43·7	47·0	" 3·3 "
" 5.	41	48	60	55	54	53	52·2	52·2	" 0·0 "
" 6.	46	52	60	66	54	58	55·5	56·0	" 2·5 "
" 7.	41	48	54	55	47	50	47·2	50·7	" 3·5 "
" 8.	47	56	63	64	49	56	52·0	58·0	" 6·0 "
" 9.	45	54	57	60	46	56	48·5	56·5	" 8·0 "
" 10.	37	45	42	48	38	40	38·5	43·2	" 4·7 "
" 11.	37	35	49	59	45	50	51·5	48·5	" 3·0 w'rmer
" 12.	45	51	57	60	55	62	53·0	58·7	" 5·7 colder.
" 13.	51	55	54	47	48	45	50·2	48·0	" 2·2 w'rmer
" 14.	41	40	63	60	59	52	55·5	51·0	" 4·5 "
" 15.	46	50	67	73	60	61	58·2	61·2	" 3·0 colder.
" 16.	57	61	65	64	57	61	59·0	61·7	" 2·7 "
" 17.	52	62	69	72	64	68	62·2	67·5	" 5·3 "
" 18.	52	65	68	72	64	63	62·0	65·7	" 3·7 "
" 19.	60	62	73	70	67	68	66·7	67·0	" 0·3 "
" 20.	66	69	68	70	64	68	65·5	68·7	" 3·2 "
" 21.	52	56	64	67	53	55	55·5	58·2	" 2·7 "
" 22.	48	51	59	63	53	54	53·2	55·5	" 2·3 "
" 23.	46	54	56	68	49	54	50·0	57·5	" 7·5 "
" 24.	43	52	64	69	58	57	55·7	58·7	" 3·0 "
" 25.	55	56	75	73	64	60	64·5	62·2	" 2·3 w'rmer
" 26.	60	59	75	74	67	60	67·2	63·2	" 4·0 "
" 27.	60	64	72	70	67	66	66·5	66·5	" 0·0 "
" 28.	64	65	68	71	61	68	63·5	68·0	" 4·5 colder.
" 29.	47	66	49	75	52	70	50·0	70·2	" 20·2 "
" 30.	65	74	80	78	72	69	72·2	72·5	" 0·3 "
" 31.	58	58	61	61	48	48	53·7	53·7	" 0·0 "
Mean of 31 days.	48·8	54·7	63·1	64·1	55·7	57·8	55·3	58·5	Aiken 3·2 colder.

The Thomasville observations from February 8 to March 7 were made by Dr. W. R. Birdsall, of New York, and from that date to March 31 by Dr. W. S. Little, of Philadelphia.

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* The cold at the time referred to was so intense that it killed palm-trees which had been growing on Sullivan's Island, near Charleston, for upward of two hundred years.

† The difference between the lowest and highest tri-daily means.

TABLE No. 4.

Comparing the mean temperature of Aiken with Thomasville during the six colder months (November to April, inclusive) with that of some of the larger cities of the United States.

	Deg.	Deg.		Deg.	
Aiken	53				
Thomasville	59				
Boston.....	33	20	colder than Aiken and	26	colder than Thomasville
New York..	36	17	“ “ “ “	23	“ “ “
Chicago....	34	19	“ “ “ “	25	“ “ “
Cincinnati..	34	19	“ “ “ “	25	“ “ “
Baltimore..	41	12	“ “ “ “	18	“ “ “
Jacksonville	61	8	w'rmer “ “ “	2	warmer “ “

TABLE No. 5.

Comparing the mean temperature of Aiken and Thomasville during the six colder months (November to April, inclusive) with that of several well-known health-resorts.

	Deg.	Deg.		Deg.	
Aiken........	53				
Thomasville...	59				
Davos........	–30	83	colder than Aiken,	89	colder than Thomasville
Colorado Sp'gs.	32	21	“ “ “	27	“ “ “
Denver.......	36	17	“ “ “	23	“ “ “
Pau........ .	45	14	“ “ “	20	“ “ “
Meran........	44	9	“ “ “	15	“ “ “
Ashville......	43	8	“ “ “	14	“ “ “
Mentone......	55	2	warmer “ “	4	“ “ “
Catania.......	56	3	“ “ “	3	“ “ “
Cannes.......	56	3	“ “ “	3	“ “ “
Santa Barbara.	57	4	“ “ “	2	“ “ “
Nice.........	57	4	“ “ “	2	“ “ “
Algiers.......	59	6	“ “ “	0	“ “ “
Cairo.........	63	10	“ “ “	4	warmer “ “
St. Augustine .	63	10	“ “ “	4	“ “ “
Madeira......	72	19	“ “ “	13	“ “ “

Humidity.—In forming an estimate of the climate of a health-resort, the humidity of the atmosphere ranks next in importance to its temperature. Judged by popular signs—such as the rare occurrence of heavy dews, infrequency of fogs, absence of condensation of moisture on the walls of houses, the rarity of rust on guns and steel instruments, and of mold on boots and shoes—both Thomasville and Aiken would be regarded as exceptionally dry. At Aiken this is further proved by the absence of the gray tree-moss (*Tillandsia*), which abounds in the Atlantic States wherever there is sufficient moisture to promote its growth.* The presence of this moss is not only a sign of moisture, but is popularly regarded as a test of the healthfulness of a locality, and it is a well-known fact that it abounds in those sections where bilious remittent fever is most prevalent.

Scientifically, the amount of aqueous vapor in the atmosphere is expressed by its absolute and relative humidity. The former is synonymous with the tension of vapor, or, more intelligibly, by the weight of water in a given quantity of air. This method of designating the humidity is seldom employed in works on medical climatology. The term relative humidity, expressing as it does the percentage of saturation, is much more satisfactory. The amount of water that the atmosphere is capable of containing in the form of vapor varies with its temperature. When it has all the vapor it is capable of holding it is said to be saturated, and this condition of saturation is expressed as 100 per cent.—that is, its relative humidity is 100 per cent. If it has only one half its complement of water, its relative humidity is said to be 50 per cent., and so on from 1 to 100 per cent. The amount of aqueous vapor that the atmosphere is capable of holding varies with its temperature, being greater when the air is warm, greater in summer than in winter, and greater in a warm than a cold climate. The relative humidity exercises a powerful influence upon animal and vegetable life. It is a well-known fact that the inhabitants of a dry climate are, as a rule, thin and sallow, while those living in a moist insular country have well-developed figures and fresh, ruddy complexions. It is to the greater dryness of this country that we owe the peculiar physique of our people, which is so different from that of our English ancestors.

Schlagintweit, a German, who traveled extensively in this country, notes this peculiarity, asserting that we are very proud of the leanness of our women: “According to Pettenkofer and Voit, the human body exhales from the lungs and skin twenty-eight ounces in twenty-four hours, and of this a little over seventeen ounces is from the skin alone, and, as the amount exhaled depends in a great measure upon the hygrometric condition of the atmosphere, it becomes apparent that even a slight change of only one per cent. in the relative humidity exercises a marked influence upon the cutaneous exhalations, and any diminution in the cutaneous and respiratory exhalations produces a corresponding increase in the urinary secretions, and not infrequently in that of the intestinal canal.” “Dry climates, by diminishing the water in the blood, act as a powerful stimulant to the nervous system, increasing its functional activity, causing excitement and sleeplessness.” Hence such climates, although admirably adapted to the treatment of pulmonary diseases, are contra-indicated in many nervous affections. “This effect is observed even in healthy persons on their removal to a dry climate, or to one of considerable elevation, and exhibits itself in a certain degree of restlessness.” Sudden changes in the percentage of relative humidity operate very sensitively in a diseased organism, their first effects being a sudden increase or diminution in the blood-pressure. Hence high altitudes, owing to diminished atmospheric pressure, even when combined with a high percentage of relative humidity, is similar in its effects to a dry climate with lower elevation.*

TABLE No. 6.

Monthly mean relative humidity at Aiken for seven seasons, and at Thomasville for four seasons.

	Aiken.	Thomas-ville.	Aiken drier than Thomas-ville.		Aiken.	Thomas-ville.	Aiken drier than Thomas-ville.
	Per ct.	Per ct.	Per ct.		Per ct.	Per ct.	Per ct.
January .	62·20	65·00	2·80	November.	61·70	67·00	5·30
February.	56·10	62·00	4·90	December.	58·80	64·00	5·20
March...	52·10	61·00	8·90				
April....	56·20	60·00	3·80	Mean ..	57·85	63·16	5·15

According to the condensed observations in Table No. 6, the mean relative humidity of the season is 57·85 per cent. at Aiken and 63·16 per cent. at Thomasville, a difference of a little over 5 per cent. in favor of the former place.

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* Whether this moss grows at Thomasville I am unable to say, and at the moment of writing have no means of ascertaining the fact.

* Hann, “Klimatologie,” Stuttgart, 1883, p. 35.

TABLE NO. 7.

Tri-daily observations of relative humidity at Aiken and Thomasville, from February 8 to March 31, 1886. The latter by Dr. W. R. Birdsall, of New York, and Dr. W. S. Little, of Philadelphia.

1886.	Aiken, 7 A. M.	Thomasville, 7 A. M.	Difference between Thomasville and Aiken.	Aiken, 2 P. M.	Thomasville, 2 P. M.	Difference between Thomasville and Aiken.	Aiken, 9 P. M.	Thomasville, 9 P. M.	Difference between Thomasville and Aiken.	Aiken, mean.	Thomasville, mean.	Difference between Thomasville and Aiken.
FEBRUARY.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.	Per ct.
8	65	96	Aiken 31 drier.	50	45	Aiken 5 moister.	66	80	Aiken 14 drier.	60·3	73·6	Aiken 13·3 drier.
9	67	83	" 16 "	41	56	" 15 drier.	47	72	" 25 "	51·6	70·3	" 18·7 "
10	44	86	" 42 "	36	53	" 17 "	56	72	" 16 "	45·3	70·3	" 25·0 "
11	86	93	" 7 "	86	64	" 22 moister.	93	87	" 6 moister.	88·0	81·3	" 6·7 m'ster
12	86	86	" 0 "	80	56	" 14 "	68	71	" 3 drier.	78·0	71·0	" 7·0 "
13	61	82	" 19 "	11	44	" 33 drier.	45	86	" 41 "	39·0	70·6	" 31·6 drier.
14	77	93	" 16 "	63	53	" 10 moister.	17	93	" 76 "	52·3	79·6	" 27·3 "
15	77	86	" 9 "	47	55	" 8 drier.	66	60	" 6 moister.	63·3	67·0	" 3·7 "
16	53	65	" 12 "	12	39	" 27 "	26	68	" 42 drier.	30·3	57·3	" 27·0 "
17	43	64	" 21 "	27	42	" 15 "	30	56	" 26 "	33·3	54·0	" 10·7 "
18	46	53	" 7 "	34	71	" 37 "	43	77	" 34 "	41·0	67·0	" 26·0 "
19	60	86	" 26 "	40	39	" 1 moister.	40	57	" 17 "	46·6	60·6	" 14·0 "
20	29	31	" 2 "	21	16	" 5 "	44	61	" 17 "	31·3	36·0	" 4·7 "
21	41	88	" 47 "	16	44	" 28 drier.	27	55	" 28 "	28·0	62·3	" 34·3 "
22	50	66	" 16 "	42	36	" 6 moister.	40	62	" 22 "	44·0	54·6	" 10·6 "
23	42	77	" 25 "	22	37	" 15 drier.	34	80	" 46 "	32·6	64·6	" 32·0 "
24	45	66	" 21 "	30	27	" 3 moister.	58	74	" 16 "	44·3	55·6	" 11·3 "
25	75	84	" 9 "	73	70	" 3 "	86	90	" 4 "	78·0	81·3	" 3·3 "
26	57	47	" 10 moister.	19	30	" 11 drier.	31	58	" 27 "	35·6	45·0	" 9·4 "
27	44	56	" 12 drier.	25	86	" 61 "	69	93	" 24 "	46·0	78·3	" 32·3 "
28	88	93	" 5 "	89	86	" 3 moister.	82	86	" 4 "	86·3	88·3	" 2·3 "
Mean of 21 days.	58·85	75·28	Aiken 16·43 drier.	41·14	49·95	Aiken 8·81 drier.	50·85	73·23	Aiken 22·38 drier.	50·24	66·12	Aiken 15·88 drier
MARCH.												
1	61	83	Aiken 22 drier.	48	74	Aiken 26 drier.	50	74	Aiken 24 drier.	53·2	77·0	Aiken 23·8 drier.
2	44	72	" 28 "	34	60	" 26 "	59	60	" 1 "	45·6	64·0	" 18·4 "
3	51	93	" 42 "	33	69	" 36 "	42	93	" 51 "	42·0	85·0	" 43·0 "
4	54	93	" 39 "	42	86	" 44 "	51	93	" 42 "	49·0	90·6	" 41·6 "
5	73	93	" 20 "	30	86	" 56 "	66	93	" 27 "	56·3	90·6	" 34·3 "
6	68	86	" 18 "	35	45	" 10 "	43	57	" 14 "	51·0	62·6	" 11·6 "
7	57	93	" 36 "	33	55	" 22 "	56	77	" 21 "	48·6	75·0	" 26·4 "
8	63	80	" 17 "	26	68	" 42 "	50	69	" 19 "	46·3	72·3	" 26·0 "
9	53	86	" 33 "	42	93	" 51 "	68	74	" 6 "	54·3	84·3	" 30·0 "
10	61	53	" 7 moister.	51	50	" 1 moister.	44	65	" 21 "	52·0	56·0	" 4·0 "
11	51	89	" 38 drier.	37	47	" 10 drier.	60	77	" 17 "	49·3	71·1	" 21·8 "
12	76	93	" 17 "	80	100	" 20 "	93	93	" 0 "	83·0	95·3	" 12·3 "
13	80	100	" 20 "	74	100	" 26 "	56	100	" 44 "	70·0	100·0	" 30·0 "
14	57	100	" 43 "	26	60	" 34 "	29	100	" 71 "	38·0	86·6	" 48·6 "
15	68	93	" 25 "	63	66	" 3 "	65	100	" 35 "	66·0	86·3	" 20·3 "
16	86	100	" 14 "	73	100	" 27 "	86	100	" 14 "	81·6	100·0	" 18·4 "
17	86	93	" 7 "	36	66	" 30 "	48	84	" 36 "	56·6	81·0	" 24·4 "
18	72	84	" 12 "	61	71	" 10 "	78	100	" 22 "	70·3	85·0	" 14·7 "
19	70	100	" 30 "	64	93	" 29 "	78	93	" 15 "	70·6	95·0	" 24·4 "
20	90	100	" 10 "	90	100	" 10 "	90	100	" 10 "	90·0	100·0	" 10·0 "
21	47	86	" 39 "	35	50	" 15 "	41	93	" 52 "	41·0	76·3	" 35·3 "
22	42	66	" 24 "	25	36	" 11 "	33	48	" 15 "	33·3	50·0	" 16·7 "
23	47	43	" 4 moister	14	26	" 12 "	37	86	" 49 "	32·6	51·6	" 19·0 "
24	36	86	" 50 drier.	22	47	" 25 "	42	86	" 44 "	33·3	73·0	" 39·7 "
25	55	86	" 31 "	24	46	" 22 "	48	75	" 27 "	42·3	69·0	" 26·7 "
26	70	81	" 11 "	37	51	" 14 "	51	93	" 42 "	52·6	75·0	" 22·4 "
27	70	84	" 14 "	50	100	" 50 "	59	100	" 41 "	59·6	94·6	" 35·0 "
28	73	100	" 27 "	61	90	" 29 "	72	100	" 28 "	68·6	96·6	" 38·0 "
29	93	93	" 0 "	93	82	" 11 moister.	93	100	" 7 "	93·0	91·6	" 1·4 m'ster
30	100	82	" 18 moister	58	74	" 16 drier.	76	78	" 2 "	78·0	78·0	" 0 "
31	86	74	" 12 "	39	39	" 0 "	42	93	" 51 "	55·6	68·6	" 13·0 drier.
	65·80	85·96	Aiken 20·16 drier.	46·32	68·70	Aiken 22·38 drier.	58·25	85·61	Aiken 27·36 drier.	56·88	80·06	Aiken 23·18 dri'r

The winter mean at Thomasville is 65·33 per cent., while that of Aiken is 60·90 per cent., a difference of 4·43 per cent. In the spring the relative humidity is 61·00 per cent. at Thomasville and 54·80 per cent. at Aiken, a difference of 6·20 per cent. in favor of the latter place. The detailed observations taken by Dr. Birdsall and Dr. Little during the months of February and March give Thomasville a much larger percentage of humidity than that recorded in Table No. 6, while the Aiken observations for the same period exhibit a variation of only one half per cent. from the annual mean. According to these observations, the relative humidity for the months of February and March was 73·09 per cent. at Thomasville and 53·56 per cent. at Aiken, a difference of nearly 20 per cent. It should be remembered, however, that, owing to frequent rains, the relative humidity at Thomasville during the month of March was greatly in excess of the usual mean for that month. The chief object in inserting this table is to enable the reader to follow the daily course of the relative humidity.

The only attempt at a classification of climate, according to its relative humidity, is the rather unsatisfactory one of Vivenot, which is as follows :

1. Dry climates.. { a. Excessively dry.......... 1– 55 per cent.
  b. Moderately dry..........56– 70 " "
2. Moist climates. { a. Moderately moist.........71– 85 " "
  b. Excessively moist........86–100 " "

According to this standard, Aiken and Thomasville would both rank as moderately dry climates. The mean relative humidity of Aiken is, however, less than that of any station east of the Rocky Mountains where hygrometric observations have been taken, and during the first four months of the current year was even less than that of Denver, Colorado.* The spring is the driest season at both places, the relative humidity of March being lower than that of all the other months.

In the following tables will be found a comparison of the relative humidity of Aiken and Thomasville with that of some of the large American cities, and of the leading health-resorts in this and foreing countries:

TABLE No. 8.

Comparing the mean relative humidity of Aiken and Thomasville during the six colder months with that of some of the larger cities in the United States.

	Per c	Per c.					Per c.		
Aiken.......	57·9								
Thomasville..	63·2								
San Francisco.	72·9	15	moister	than	Aiken	and	9·77	than	Thomasville.
Charleston...	72·8	14·9	"	"	"	"	9·6	"	"
Chicago.....	71·7	13·8	"	"	"	"	8·5	"	"
San Diego....	71·2	13·3	"	"	"	"	8·0	"	"
Jacksonville..	71·0	13·1	"	"	"	"	7·8	"	"
Boston......	69·8	11·9	"	"	"	"	6·6	"	"
New York ...	69·8	11·9	"	"	"	"	6·6	"	"
Cincinnati....	67·7	9·8	"	"	"	"	4·5	"	"
Baltimore....	66·3	8·4	"	"	"	"	3·1	"	"

TABLE No. 9.

Comparing the mean relative humidity of Aiken and Thomasville during the six colder months with that of some of the principal health-resorts of the United States, Europe, and Africa.

	Per c	Per c.					Per c.		
Aiken.......	57·9								
Thomasville..	63·2								
Pau.........	82·5	24·6	moister	than	Aiken	and	19·3	than	Thomasville
Davos.......	76·6	18·7	"	"	"	"	13·4	"	"
Nice...	71·0	13·1	"	"	"	"	7·8	"	"
Meran.......	67·5	9·6	"	"	"	"	4·3	"	"
Cairo........	67·0	9.1	"	"	"	"	3·8	"	"
Ashville.....	63·8	5·9	"	"	"	"	0·6	"	"
Cannes †.....	62·0	4·1	"	"	"	"	1·2	"	"

This comparison, which is based upon the result of many years of observation, proves that Aiken is from 4 to 24 per cent. drier than all the other resorts mentioned in the table, and, as the list comprises all the well-known stations for which I have been able to obtain reliable data, Aiken may justly be ranked as *one of the driest health stations in the world.* I have been unable to obtain any information as to the relative humidity of Colorado Springs and Manitou, but, judging from the hygrometric conditions of other places west of the Rocky Mountains, these resorts are even drier than Aiken. Thomasville is drier by from 0·6 to 19·3 per cent. than the other health-resorts mentioned in the table, except Cannes on the Riviera, which is 1·2 per cent. drier.

Rain and Snow.—The average amount of rain at Aiken during the six colder months is 23·18 inches. The rain-fall is greatest during the months of March and April, but even in these months it seldom interferes with the out-door exercise of the invalid. Of all the factors of climate, the rain-fall is the most misleading, the total amount varying greatly in different years and seasons. The quantity as measured in inches affords no criterion for judging of the dryness of a locality, as a large amount may fall in a few hours, while a much smaller amount may be distributed over several days. Hence, at health-resorts, the duration of the rain-fall is more important than the quantity which falls. One of the chief objects that an invalid has in view in going south is to be able to pass most of the time in the open air, and as this is curtailed by long-continued rain-storms, it is all-important to determine their duration. Unfortunately, I have been able to collect but little information on this point in regard to the places under consideration, the only record that has been made being the rather arbitrary one of the number of fair days.

TABLE No. 10.

Average rain-fall and number of fair days at Aiken for eleven years.

	Rain in inches.	Number of fair days.
January............................	3·64	19¾
February........	3·26	19¼
March.................	4·86	21
April...................	4·71	23½
November..........................	3·43	19¼
December..........................	3·28	20¼
Months..........................	23·18	123
Winter..........................	10·35	19¾
Spring..........................	12·83	21¼

In studying the rain-fall in connection with the out-door life of the invalid, it is also necessary to take into consideration the character of the soil. If the ground is retentive of moisture, especially if it be composed of admixture of clay, the walks become muddy after heavy rains, and hours, and perhaps days, may elapse before they become sufficiently dry to enable the invalid to walk out with safety and comfort. If, however, the soil is sandy and porous, the water disappears rapidly from the surface, and a few hours' sunshine suffices to dissipate all traces of moisture. This is particularly the case at Aiken, where, owing to the sandy nature of the soil and the absence of all moisture near the surface, the ground dries so rapidly, even after the heaviest showers, that all traces of water usually disappear from the surface within an hour or two, thus materially curtailing the time that the invalid is confined to the house.

At Aiken there is usually a slight fall of snow once during the season, but this is generally very light, and a little sunshine is sufficient to remove all traces of it. Thomasville, being a hundred miles farther south, may, for all practical purposes, be regarded as beyond the snow-line. Once only during the last fifteen years, according to Dr. T. S. Hopkins, has that place been visited by a snow-storm.

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*	Aiken.	Denver.		Aiken.	Denver.
	Per cent.	Per cent.		Per cent.	Per cent.
January......	60·50	66·70	March......	56·90	65·26
February.....	51·30	51·70	April.......	56·20	60·70

† According to Hann (*op. cit.*, p. 444), the relative humidity of Meran, Cairo, and Cannes is much higher than the figures in the table.

At Aiken, owing to the extreme dryness of the atmosphere, there is little or no dew. Frosts, of course, occur from time to time, but are usually light, and generally confined to the months of January and February.*

Winds.—At Aiken the prevailing winds are from the southwest, and are remarkable for their extreme dryness. Owing to the northeasterly trend of the North American coast, the northeast wind has to travel over hundreds of miles of the dry pine forests of North and South Carolina, and is thus deprived of most of its moisture before reaching Aiken. Hence, during the first twenty-four or forty-eight hours of the prevalence of such a wind, the atmosphere usually remains clear and bright; indeed, during some of our most delightful days the wind is from that quarter. Strangers occupying houses in an exposed situation are liable to form an impression that Aiken is a windy place, but this is readily dissipated by a walk through the town proper. A year's observation with a Robinson self-recording anemometer shows that the average velocity of the winds is only three miles and a half an hour.

Table No. 11.

Giving the direction and velocity of the wind at Aiken during the six colder months.

	Direction.	Velocity—average number of miles per hour.		Direction.	Velocity—average number of miles per hour.
January...	S. W. & W.	3·77	April......	S. W.	4·03
February..	S. W.	3·84	November..	S. W.	2·55
March.....	S. W.	3·79	December..	S. W. & W.	3·04

Summary.—On looking over the meteorological data as given above, we find that the climate of Aiken and Thomasville during the six colder months (November to April) is moderately cold and fairly equable, with sufficient elevation to insure good drainage and free circulation of air, that the days are fair during two thirds of the season, and that the prevailing winds are from a dry quarter and of moderate velocity. At both places the winter is short, commencing at Christmas and terminating early in March, the peach-trees in Aiken being usually in full bloom by the end of February. Compared with each other, Thomasville is by a few degrees the warmer of the two, but, as regards humidity, Aiken is not only much drier than Thomasville, but the driest of all our health-resorts except those located in Colorado and New Mexico.

According to Thorrowgood,† the rule to be followed in the selection of a health-resort for consumptives "is to endeavor to have a residence on a dry soil and at a moderate elevation, where there will be free circulation of air, and to avoid places lying low where the air is damp, stagnant, and cold." Aiken comes up to these requirements, and the good results attained there in the treatment of pulmonary phthisis afford ample proof of the correctness of Dr. Thorrowgood's views. Several years ago I classified the results in over a hundred cases of phthisis treated at Aiken. Of these, fifteen per cent. were arrested, and most of them permanently, and, of the remainder, fifty per cent. were improved. I regret that I have been unable to obtain any statistics of results at Thomasville.

In preparing this paper I have endeavored to be correct and impartial, and, if I have written in greater detail about Aiken, it is because I am better acquainted with its climate and surroundings, having lived there for upward of seventeen years, while in regard to Thomasville I have labored under serious difficulties, owing to the inability of Dr. Hopkins to furnish me with the requisite data in regard to the winds, number of fair days, etc., Dr. Hopkins having turned over all the recent meteorological observations to Dr. Huntington Richards, for publication in Wood's "Reference Hand-book of the Medical Sciences."

A RARE CASE, WITH OBSCURE DIAGNOSIS.*

By C. C. HENRY, M. D.,
BROOKLYN.

By permission of Dr. Andrew Otterson, physician in charge, and Dr. J. A. McCorkle, consultant, and by having the opportunity to watch the case closely, I am privileged to present the following unique case:

A male child, three years of age, had been playing as usual all the morning of February 25, 1886, until about 11 o'clock, when he said: "Something hurts me; take it off," indicating the place by placing his hand upon the outer part of the right thigh a little below the trochanter. An examination showed nothing externally. He continued playing until after luncheon, when he became fretful and wanted to lie down. He was put to bed, and soon fell asleep. He was awakened between 4 and 5 P. M.—awaking ill-humored and crying—but, upon seeing the coal-carts, which are his hobby, he became pacified, and for an hour was interested. Then he complained of his leg hurting him when any pressure was made upon it. At about 6 o'clock fever developed without chill or other premonition than that mentioned. He had no appetite, his tongue was furred, his bowels were constipated, and he was restless.

At about 8 P. M. the fever had increased. A febrifuge was then given hourly, but the fever continued to rise until, at 2 A. M., it reached 106° F. His pulse was too rapid to count, he was restless, delirious, and moaning.

At midnight bright-red spots, ranging in size from half a line to three lines in diameter—some round, others irregular, and all elevated—appeared over the trunk, legs, and feet, and looked as if the capillaries were distended.

By the use of the febrifuge and an anodyne the fever was reduced and restlessness quieted. He fell asleep about half past five next morning, and slept about an hour, awaking rational and easy. The temperature was much reduced, but still above the normal, the pulse was less frequent, and he was very much prostrated. He asked for toast, but vomited it soon after eating. The petechiæ were of a bright-red color.

At 10 A. M. he was slightly delirious, with a tendency to convulsions, for a short period. The fever and pulse were increasing, nausea and vomiting were becoming troublesome, his tongue was coated, his bowels were constipated, micturition was free, and he did not complain of pain.

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* I have been unable to obtain any observations in regard to the rain-fall at Thomasville.

† Thorrowgood, "Climatic Treatment of Consumption," p. 17.

* Read before the Medical Society of the County of Kings, June 15, 1886.

February 27th.—He passed a restless night and was somewhat restless throughout the day, with considerable nausea and vomiting. He complained of pain in his right leg when pressure was made upon it. He was becoming rapidly emaciated, both eyes were sunken, the left more than the right, and he had a wild expression. Temperature 102°, pulse weak and irregular.

28th.—He was very restless all night and somewhat delirious. Temperature, 103°; restless all day, and at about six o'clock in the evening he became almost maniacal, scratching and tearing at everything within his reach; he then straightened himself, was comparatively quiet, and lay as if dissolution were taking place. With every inspiration his inferior lip was drawn in. The pulse very rapid, weak, remittent, and intermittent. A turpentine enema was given, and was shortly followed by improvement and an evacuation of the bowel. It was then noticed that the right leg had become stiffened. This stiffness became general in the following order: Right leg, left leg, trunk, neck, and arms. He slept quite well during the night. The next morning, the 29th, it was observed that his position had remained the same for several hours. An attempt to move him caused a sharp cry. He said, "You hurt me." His manifestation was that of soreness rather than of pain. As soon as he would become accustomed to his new position, which required but a few seconds, he would lie apparently free from pain. The nurse was instructed not to move him. With the exception of his hands and forearms, which he could and did move, he lay motionless for about twelve hours, when it was noticed that his hands and feet were somewhat puffy, and the hands purple. The respiration was somewhat labored. A change in his position rendered respiration easy, the hands assumed their normal color, and the swelling of the hands and feet disappeared. Whenever he would lie a long time in one position these manifestations would again occur, and again disappear very soon after changing his position.

For eight days this condition continued about the same. The temperature varied but little from 102°, the pulse was weak, irregular, remittent, and intermittent, and respiration was irregular. There was some quiet delirium at times.

On the 8th of March the soreness and stiffness began to abate, and left inversely to its invasion—viz., arms, neck, trunk, left leg, right thigh, and right calf and foot.

On March 11th he had free use of all his muscles, with no pain or soreness. The fever continued for about one week longer, with some gastric disturbance, vomiting occurring occasionally. Then there was an apyrexia for a few hours, the patient being free from fever for the first time since his attack. No sweating had occurred up to this time.

A period of quotidian intermittent fever then followed. The cold stage (there being no distinct chill at any time) would occur at four or five o'clock in the afternoon, passing into the hot stage, which would pass off at about midnight, with an almost unappreciable moisture. This intermittent character continued for ten days, then left him entirely free from fever.

He was extremely weak and emaciated, and showed great nervous exhaustion. The pulse continued irregular and intermittent for several days longer. His convalescence was very slow. After the fever left him, three weeks elapsed before he was able to stand alone, and then his co-ordination was very imperfect. Even now there is enervation.

During the entire course of the disease the intestines were inactive. No spontaneous evacuations of the bowel occurred until convalescence was well established, and during the period of intermittent fever there was retention of the urine, it sometimes being retained for two days. No albumin was found upon examination.

No definite diagnosis was made. All agree that a malarious element was present. Dr. Otterson inclines to the belief that it was a rare form of pernicious fever not rheumatic, while Dr. McCorkle inclines to the belief that rheumatism was a prominent factor.

The treatment was on general principles. Fever was controlled the first night by aconite and spt. ætheris nit.; afterward by quinine. During the intermittent period the use of the latter was carried to cinchonism, then discontinued altogether. On the third day of the disease one dose of salicylate of sodium was given *per rectum*. This was the only specifically anti-rheumatic remedy used during the entire course of the disease. Hyoscyamus and camphor to quiet restlessness, calomel to evacuate the bowels, nux vomica and phosphorus to restore the shattered nervous system, and brandy to stimulate and sustain, were also administered.

As evinced by the petechiæ, feeble volition, feeble, irregular, remittent, and intermittent pulse, irregular respiration, almost if not total inaction of the intestines, all occurring within a very few hours, and later on the paralyzed condition of the bladder, together with the treatment and its results—I am led to believe that, whatsoever may have been the pernicious element which caused this great prostration, its force was expended upon the nervous system, the sympathetic especially, and that it did its work within the first few hours, the succeeding period being that of the repair and restoration of that system.

TRUE CROUP.*

By DAVID PHILLIPS, M. D.

BEFORE entering upon the subject-matter of my paper, let me call your attention to one fact: in 1885 there were in this city 855 deaths from croup. As the mortality is over 80 per cent., this means 1,026 cases at least during the year. We therefore have to deal with a disease which is common with us, and which generally results fatally, and it behooves us to use our best efforts in the endeavor to ascertain what is the most effectual treatment with which to combat it.

The striking and almost characteristic symptoms of croup, briefly stated, are these: Hoarse voice, noisy breathing, brassy, stridulous cough, attacks of dyspnœa, and symptoms of continuous fever. The cough at first is infrequent and of short duration, but after a time occurs in paroxysms, and the patient becomes more or less cyanosed during it. The voice, which was at first hoarse, gradually becomes reduced to a whisper or is suppressed. The paroxysms of dyspnœa, which occur at first every hour or two, toward the close of the disease become prolonged so as to be almost continuous, and the patient clutches at the throat and tosses about. The larynx moves violently, the abdominal muscles work with those of the thorax, the surface is bathed in perspiration, and the patient, struggling for air, livid and in agony, but perfectly conscious, is strangled to death.

In other cases, several hours before death a remission of all the symptoms takes place, the dyspnœa diminishes, the patient lies quiet, the expression of extreme anxiety disappears, and the unexperienced might regard this as a commencement of improvement; but the clammy sweat, the uncountable pulse, and the rapid breathing, point only too surely to the end. One thing may be said, however: If this seeming improvement lasts for twelve hours, it may be taken as an evidence of the decline of the disease. In some cases cyanosis is well marked, but in others it is either absent or so slight that, although the patient is gradually suffocating, the attendants are unaware of the danger. These different conditions depend upon whether inspiration or expiration is most interfered with. When expiration is difficult, condensed air in the lung will result; the blood-vessels will therefore be compressed, damming up of the blood consequently ensues, and from this results the cyanosis. When, on the other hand, inspiration is the most difficult, there is a rarefaction of the blood in the lung; that organ solicits more blood, and consequently there is no cyanosis. In this event the patient dies partly from incomplete aëration of the blood, and partly from paralysis of the necessary muscles due to carbonic-acid poisoning; hence the respiration in all cases should be carefully watched, as many, under such circumstances as those just stated, might be saved by the use of such timely measures as tracheotomy or intubation.

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* Read before the Thirteenth District Branch of the New York County Medical Association, November 18, 1886.

As to the diagnosis of croup, with the exception of an acute catarrhal laryngitis in the young child, which careful watching may differentiate, the only disease it is likely to be confounded with is laryngeal diphtheria.

In order to have a case of true croup, all of these symptoms should appear—viz.: a continuous fever, croupy cough, hoarseness, loud, croupy breathing, and suffocative attacks, and the disease must be progressive; if there is any abatement of the symptoms during the day, it is but slight. If any of these symptoms are lacking, it is not a case of true croup.

I know of no certain method by which croup can be distinguished from laryngeal diphtheria except this: I call all cases having the above-mentioned symptoms, where no membrane can be seen in the throat or nose, croup; when a membrane can be seen, diphtheria. The necessity for a differential diagnosis is not on account of the treatment, but of the sequelæ which follow one disease but not the other.

The constitutional symptoms, such as the continuous fever, etc., have led some to believe that croup is a constitutional disease with localization upon the larynx, as in typhoid fever we have localization upon the intestines. But is it to be wondered at that we have a rapid pulse and an increased temperature when so vital a part of the organism is inflamed as in this disease, when the patient has repeated attacks of dyspnœa, and when the nervous system is more or less excited? In my opinion, the wonder is that the temperature is not higher, considering especially how susceptible the nervous system of a child is, a simple attack of indigestion causing an elevation of temperature which may last for hours. We might as justly call pleurisy or peritonitis a constitutional disease as croup.

Others believe that croup and diphtheria are the same disease, basing their opinion upon the fact that certain cases of what they suppose to be croup occur without prior symptoms of diphtheria, and that these cases are contagious and produce diphtheria in others. I contend that such cases are mild cases of diphtheria *a priori*, giving rise to no symptoms to attract attention until the laryngeal complication intrudes itself on the observer. I am certain that, upon careful examination in these cases, a membrane will always be found in either the throat or the nose. Nasal diphtheria, as we all know, is almost always insidious in the outset, sometimes remaining indolent for a long period, its gradual extension to the throat occasioning but little soreness, and the first warning of its presence often being the occurrence of croupy symptoms. I contend, then, that diphtheritic laryngitis can only occur by the extension downward of an already existing diphtheria, the evidences of which can be found by an examination of the throat or nose, while croup commences in the trachea or larynx and may extend upward and downward. In former times, when diphtheria was not prevalent, the membrane was always confined to the larynx and trachea, and cases of croup were rare. Now that diphtheria is prevalent, the membrane is found also in the throat, and croup is said to be quite common; but this is simply because these are cases of diphtheritic laryngitis, and they should not be called croup. If diphtheria should become extinct, we should still have the disease called croup, and, as it is, both exist.*

Croup is not infectious or contagious, and is not followed by the sequelæ common to diphtheria; the kidneys and intestines are never involved, and convalescence is rapid.

Pathology.—In the commencement we have in croup more or less redness and swelling, and a thickened œdematous and softened condition of the laryngeal mucous membrane. The larynx and trachea are covered with a thick, tenacious mucus. This muco-purulent secretion may extend downward into the bronchi, and death may take place before the process goes any further, the patient's symptoms being just as violent as if membrane were present. If death does not occur at this stage, a fibrinous exudation of more or less thickness takes place, which can be peeled off without any loss of the mucous membrane underneath, just as we can peel off the exudation in amygdalitis. This deposit may be very thin or quite thick, may occur in patches or may form casts of the larynx, trachea, and bronchi; but the thickness or thinness of the membrane seems to have no effect upon the symptoms, they being equally severe in either case. This membrane, according to Wagner, contains no fibrin, but consists of epithelial cells, which undergo degeneration and form irregular blocks. It has been said lately that in croup only normal pus-cells are found, while in diphtheria, besides these, there are found smaller pus-cells of uneven outline in which microbes have been discovered.

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* A table is given in Meigs and Pepper's work on the "Diseases of Children" which shows that after diphtheria had become recognized as a new disease in Philadelphia (1860), it added for several successive years more than 300 to the deaths in each year in that city, while the number of deaths from croup continued to be the same as before.

With this brief synopsis of the general characteristics of croup we will proceed to discuss its treatment.

When a false membrane forms on a mucous membrane, it is rarely, if ever, organized, as it is not permitted to remain in contact long enough for vitalization, a secretion occurring beneath it, which will raise and detach it if the patient lives long enough.

In croup two conditions present themselves for treatment: 1. The thickened and infiltrated condition of the laryngeal mucous membrane, with the accompanying submucous œdema. 2. The presence of false membrane. Now, we have a medicine—calomel—which is a most efficient agent for removing the first condition, while, should the second be present, it diminishes its cohesive attachment to the mucous membrane, and renders the lymph less fibrinous and more readily absorbed. Besides this local action of calomel on the larynx, it seems, by its peculiar effects on the intestinal tract as a whole, to produce an alterative action which tends to stop the inflammation, reminding one, in this respect, of the action of large doses of iron when given in erysipelas. It also lessens the plasticity of the blood, and thus tends to prevent exudation. Calomel thus meets all the indications for the treatment of croup.

One thing more remains to be mentioned—namely, the danger of suffocation. This may take place before the calomel has had an opportunity to produce results, as some time elapses before the remedy can exert its full effects in the vicinity of the vocal cords, there being few, if any, glands in this location. We have, fortunately, in the O'Dwyer tube a most efficient instrument, which will keep the larynx open, and thus give time for the production of the effects of calomel referred to. It should be remembered, however, that the O'Dwyer tube is only a temporary expedient, an exudation into the bronchi not being prevented by its use; consequently, notwithstanding the use of the tube, the calomel should be administered until its characteristic passages are produced. It should then be discontinued, as its further administration seems to be harmful.

As the O'Dwyer tube produces ulceration, if nothing worse, it should not be left in position longer than thirty-six hours. While it is in position, the patients should take liquid food in very small quantities until they become accustomed to swallowing, and a very good method is to drop the liquids into the mouth by means of a medicine-dropper. After its removal, it may, should it become necessary, be inserted again.

The following system of treating croup and diphtheritic laryngitis has yielded me the most gratifying results; but, to obtain them, scrupulous attention must be given to every detail: I commence by administering an emetic, using ipecac in the croup cases, and sulphate of copper in the diphtheritic. As soon as the emetic has produced its effect, I give the patient one grain of calomel every hour, persisting in this until the characteristic stools appear, no matter how alarming the symptoms of the disease may become. At the same time I envelop the patient's throat in a flax-seed poultice covered with flannel, and over this oil-silk. Renew these poultices every half-hour. The poultice should extend from the upper border of the sternum to behind the ears. I also order the patient to inhale steam every hour or two for a quarter of an hour at a time, in addition to which I have placed in the room an open vessel half filled with water, to which turpentine is added. This I keep boiling by means of an alcohol-lamp, or some other suitable apparatus, about a tablespoonful of turpentine being consumed every hour. This vapor-producer should be kept in action night and day.

From half a teaspoonful to two teaspoonfuls of whisky (according to the patient's age), in a tablespoonful of milk, should be given every hour.

If symptoms of continued dyspnœa appear, the O'Dwyer tube should be introduced at once. The early introduction of the tube in cases calling for it probably prevents lung complications.

As soon as the characteristic calomel stools occur, the calomel should be discontinued, and a mixture of chlorate of potassium and iron be given. Ten to twenty drops of the tincture of iron and from one to two grains of the chlorate of potassium, according to the patient's age, should be given every hour. Continue the whisky all through the treatment. After twenty-four hours reduce the dose of the potash one half, continuing the reduced dose for another twenty-four hours, after which stop its administration. As regards the iron, it should be given at greater intervals as the condition of the patient improves.

Digitalis is exhibited whenever necessary.

Under this treatment the temperature has been found to fall within twenty-four hours, and septic symptoms have never appeared during the course of the disease.

In conclusion, let me ask those of you who have witnessed the struggles and agonies of children suffering from this terrible disease to adopt this treatment. I have the fullest confidence, based upon repeated experience, that it will not be found wanting in the hour of need.

Cascara Cordial.—In a paper read before the Medical and Surgical Society of the Kanawha Valley ("Med. and Surg. Reporter"), Dr. R. S. Henry, of Charleston, W. Va., says: "While much may be done by a proper selection of the concentrated and improved forms of medicine, and by administering nauseous drugs in pills and granules or capsules, there still remain many drugs which it is necessary or expedient to administer in fluid form. It is to render this large class of preparations acceptable to the palate that the physician often tries the whole line of vehicles, without satisfaction to himself or to his patient. A vehicle which would combine the properties of compatibility, permanency, and innocuousness, and above all possess the quality of disguising and rendering positively agreeable to the taste many of these nauseating and bitter preparations, must necessarily meet with the universal appreciation of practitioners, and be a priceless boon to their patients. It is the purpose of this note to call attention to such a vehicle and corrigent, and to suggest a few illustrative formulæ which will indicate its very wide range of application in every-day practice. We believe that that combination of aromatics and carminatives with *Cascada sagrada*, known as cascara cordial, introduced by Messrs. Parke, Davis & Co., fulfills every required indication. In addition to its power of disguising the taste of such bitter drugs as quinine, its gentle laxative properties render it peculiarly well adapted for addition as a corrigent to the many preparations which, given alone for any length of time, tend to interfere with the normal action of the bowels, such as the various preparations of iron and opium, than which no others are more frequently indicated and more used by physicians."

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Edited by Frank P. Foster, M. D.

NEW YORK, SATURDAY, DECEMBER 25, 1886.

A NOVEL INDICATION FOR OOPHORECTOMY.

At a recent meeting of the Obstetrical Society of Philadelphia, for a report of which we are indebted to the society's secretary, Dr. W. H. H. Githens, a communication was made by Dr. Howard A. Kelly which seems more than ordinarily likely to excite attention. It was the brief presentation of the history of a case in which both ovaries and oviducts were removed in order that an artificial cessation of ovulation and menstruation might be brought about for the cure or alleviation of a condition diagnosticated as subinvolution and chronic inflammation of the uterus. Although the ovaries were found strewn with follicles as large as a pea, and covered each with a dense capsule, and were considered by Dr. Kelly to be diseased, that gentleman insisted that the operation had had no reference whatever to any disease that might exist in the uterine appendages, but had been undertaken solely on account of the state of the uterus. He stated also that he looked upon the indications in this case as so well marked that he intended to make it the subject of a more detailed communication.

The patient was about thirty-five years of age, and had reared five children, but for several years she had suffered with constant soreness of the whole hypogastrium, a spot of intense burning pain to the left of the uterus, and a constant dark-colored discharge from that organ. Her sufferings were much increased by each menstrual congestion, and had been aggravated by several early abortions. Dr. Kelly intimated that abortion had become habitual with her, and that complete rest had failed to break up the habit; wherefore, he thought, she could not again become a mother. On the fourteenth day after the operation, she was able to be about, in a room adjoining her bedroom, and the uterus was found to be free from tenderness and already undergoing involution rapidly.

In the discussion, Dr. Charles Meigs Wilson remarked that he considered oophorectomy a resource of doubtful propriety as a remedy for metritis, for, as the physiological menopause would not stop such an inflammation, we could scarcely expect an artificial extinction of the menstrual function to do so. He expressed a doubt as to the moral right of exposing a patient to the risks of abdominal section for such a condition.

The term chronic metritis is apparently passing out of use; whether in conformity to more enlightened pathological views or in obedience to the fashion of the day, it is unnecessary for our present purpose to inquire. Suffice it to say that those who still employ it seem to make it cover a diversity of pathological conditions concerning which it may be said that, while they may make a woman very wretched, they scarcely endanger her life, or even entail permanent disability. The same may be said of uterine subinvolution. The morbid states included under these terms are very common, but for the most part quite amenable to treatment far less heroic than that which was adopted in this instance. Dr. Kelly stated, however, that in this particular case careful treatment, by others as well as himself, had produced only moderate and temporary improvement. To admit, therefore, that oophorectomy was a legitimate resort in this instance is far from admitting that such would be the case in even a small percentage of like affections. Moreover, we can not yet know what the final result is to be in the particular case in question; indeed, so far as it is known, over and above the mere fact of recovery from the operation, we attach little importance to the statement that at the end of fourteen days the uterus was found rapidly undergoing involution, for it is difficult to imagine that so brief an abeyance of ovarian action could have had anything to do with such a result.

MINOR PARAGRAPHS.

LISTERISM AS A PREVENTIVE OF TETANUS.

Some interesting collateral points are being brought out in connection with M. Verneuil's doctrine of the equine origin of tetanus. Among the more striking observations brought to light is the statement by a veterinarian of Noisy-le-Sec, a village where twelve horses died of tetanus during the years 1883, 1884, and 1885, to the effect that operation wounds that admit of the adequate application of suitable dressings are rarely followed by the disease. Major operations on the foot, he says, always prove successful if antiseptic dressings are used, but castration, leaving a wound difficult to treat antiseptically, is invariably fatal. M. Verneuil continues the exposition of his theory in current numbers of the "Gazette hebdomadaire de médecine et de chirurgie."

ITEMS, ETC.

Infectious Diseases in New York.—We are indebted to the Sanitary Bureau of the Fourth Division of the Health Department for the following statement of cases and deaths reported during the two weeks ending December 21, 1886:

DISEASES.	Week ending Dec. 14.		Week ending Dec. 21	
	Cases.	Deaths.	Cases.	Deaths.
Typhoid fever	31	10	11	9
Scarlet fever	42	8	31	4
Cerebro-spinal meningitis	5	5	5	4
Measles	500	74	569	64
Diphtheria	126	58	102	46

The International Medical Congress.—At the Copenhagen session of the Congress, Dr. A. Jacobi was appointed the American member of the Committee on the Collective Investigation of Disease, and permitted to select a colleague in the United States. Thus the pamphlets and circulars prepared by the General Committee in London, or with its authority, were distributed under Dr. Jacobi's name and that of Dr. N. S. Davis, having been made returnable to Dr. Jacobi's address, on January 1, 1887. Having resigned his position on the committee, Dr. Jacobi asks us to announce that holders of the pamphlets should send them to Dr. N. S. Davis, 85 Randolph Street, Chicago.

The New York Physicians' Mutual Aid Association held its eighteenth annual meeting on the 11th of last month. The reports of the president and the treasurer showed a gratifying increase in the number of members as the result of the recent extension of the association's field to the entire State. Officers were elected as follows: President, Dr. G. A. Peters; vice-presidents, Dr. W. W. Reese and Dr. G. G. Wheelock; trustees, Dr. D. Magie, Dr. O. B. Douglas, and W. F. Mittendorf; treasurer, Dr. R. Campbell; corresponding secretary, Dr. D. Lewis; secretary, Dr. W. T. Alexander. Copies of the report may be had by addressing the secretary, at Station M, New York.

The "Journal of Nervous and Mental Disease," it is announced, will hereafter be published by Messrs. J. H. Vail & Co., 21 Astor Place, New York, to whom subscriptions, exchanges, books for review, etc., should be sent. Communications for the editor should be addressed to Dr. B. Sachs, 30 West Fifty-ninth Street.

Army Intelligence.—*Official List of Changes in the Stations and Duties of Officers serving in the Medical Department, United States Army, from December 5, 1886, to December 18, 1886:*

Woodhull, A. A., Major and Surgeon. Ordered for duty at post of Fort Leavenworth, Kansas. S. O. 135, Department of the Missouri, December 3, 1886.

Pope, B. F., Major and Surgeon. Relieved from duty in the office of the Surgeon-General of the Army, and will report in person to the president of the Army Medical Examining Board in New York city for duty as member and recorder of the board. S. O. 285, A. G. O., December 9, 1886.

Ainsworth, F. C., Captain and Assistant Surgeon, will repair to this city and report in person to the Secretary of War, and, on completion of the duty which may be required of him, will return to his station (New York city). S. O. 280, A. G. O., December 3, 1886.

Ainsworth, Frederick C., Captain and Assistant Surgeon. Relieved from duty as recorder of the Army Medical Examining Board, New York city, and ordered to report in person to the Surgeon-General of the Army for duty in his office. S. O. 282, A. G. O., December 6, 1886.

Turrill, H. S., Captain and Assistant Surgeon. Ordered for duty as post surgeon, Fort Spokane, Washington Territory. S. O. 209, Department of the Columbia, November 29, 1886.

Carter, Edward C., Captain and Assistant Surgeon. Leave of absence extended six months. S. O. 281, A. G. O., December 4, 1886.

Barrows, Charles C., First Lieutenant and Assistant Surgeon. Granted leave of absence for two months, to take effect when his services can be spared by his post commander. S. O. 285, A. G. O., December 9, 1886.

Wilson, George F., First Lieutenant and Assistant Surgeon. Granted leave of absence for one month, with permission to apply to headquarters, Division of the Missouri, for an extension of twenty days, to take effect about December 15, 1886. S. O. 125, Department of Dakota, December 1, 1886.

Williams, John W., Major and Surgeon. Ordered for duty at Jackson Barracks, La. S. O. 205, Division of the Atlantic, December 14, 1886.

Pope, Benjamin F., Major and Surgeon. So much of S. O. 285, A. G. O., December 9, 1886, as directs him to report in person to the president of the Army Medical Examining Board, New York city, for duty as member and recorder of the board, is revoked. S. O. 287, A. G. O., December 11, 1886.

Corson, Joseph K., Captain and Assistant Surgeon. Leave of absence extended seven days. S. O. 288, A. G. O., December 13, 1886.

Ball, R. R., First Lieutenant and Assistant Surgeon. Ordered for duty at Fort Riley, Kansas. S. O. 144, Department of the Missouri, December 13, 1886.

Naval Intelligence.—*Official List of Changes in the Medical Corps of the United States Navy for the week ended December 11, 1886.*

Percy, H. T., Passed Assistant Surgeon. Ordered to the Naval Academy, Annapolis, Md.

Norfleet, Ernest, Passed Assistant Surgeon. Granted three months' sick leave.

Society Meetings for the Coming Week:

Monday, *December 27th:* Medical Society of the County of New York; Boston Society for Medical Improvement; Lawrence, Mass., Medical Club (private); Cambridge, Mass., Society for Medical Improvement.

Tuesday, *December 28th:* New York Dermatological Society (private); New York Academy of Medicine (Section in Laryngology and Rhinology); Buffalo, N. Y., Obstetrical Society (private); Medical Society of the County of Lewis, N. Y. (quarterly); Boston Society of Medical Sciences (private).

Wednesday, *December 29th:* Auburn, N. Y., City Medical Association; Berkshire, Mass., District Medical Society.

Thursday, *December 30th:* Cumberland, Me., County Medical Society (Portland).

Letters to the Editor.

COCAINE AND DOBELL'S SOLUTION.

109 West Forty-fifth Street, *December 6, 1886.*

To the Editor of the New York Medical Journal:

Sir: To increase the effect of cocaine in acute coryza, it is advantageous to combine the drug with Dobell's solution. There is another point about this combination: Carbolic acid is often used for washing out the nasal cavities, etc., and often when it would be beneficial to use it we are prevented by the patient's feeling the irritating after-effect. This occurs, I have been told, even when the weakest useful solutions are applied. When I have used or prescribed cocaine with it, the carbolic acid has been well borne, and there has seldom been a complaint on the score of its irritating. An atomizer like a "Delano" is a handy instrument for the patient to use for spraying the nostrils when home treatment is advised for acute coryza. The same combination of cocaine and Dobell's solution will accelerate recovery from an attack of follicular inflammation of the tonsils, as well as from other diseases affecting the nose, pharynx, larynx, and trachea.

Amory Chapin.

Proceedings of Societies.

MEDICAL SOCIETY OF THE COUNTY OF NEW YORK

Adjourned Annual Meeting and Regular Meeting of November 22, 1886.

The President, Dr. Daniel Lewis, in the Chair.

Additional Report from the Committee on Hygiene.—Dr. John C. Peters, of the Committee on Hygiene, read an additional report, showing the advantage from a sanitary point of view of baling and shipping stable manure over the present method of storing it under the sidewalks and removing it in open carts at stated times. The committee recommended that the society petition the board of health to cause such a change to be made.

On motion of Dr. Barker, the Committee on Hygiene was empowered to draw up a petition in accordance with the recommendation contained in their report.

Expulsion of Members for refusing to pay their Dues.—A resolution, offered by the treasurer, was adopted, providing for the payment out of the funds of the treasury of the dues of all honorable members of the society who were in arrears, and whose present circumstances would make it embarrassing for them to pay such dues; and for the expulsion of such members as were able to pay their dues but refused to do so.

The retiring President's Address.—Dr. Daniel Lewis, the retiring president, read an address in which he again thanked the society for the honor conferred upon him in electing him twice to preside over its deliberations, and referred to the duties of the society, to the harmonious relations existing between it and the Academy of Medicine, in whose halls the meetings were now held, and to the desirability of having as members the remaining thousand physicians in the city who belonged among the regular profession.

Dr. Laurence Johnson, the president-elect, in accepting the office, promised to discharge its duties to the best of his ability, and in the interests of those who had conferred this high honor upon him. He spoke of the relations of the society to the public, to the board of health, to the general profession, and to itself; he also referred to the abuse of medical charities, and said that those who took advantage of them belonged to one of four classes—the rich, those in good circumstances, the poor, and the paupers. The wealthy who took advantage of medical charities did so through innate meanness, and this abuse could not be easily avoided; the well-to-do man began with evading the specialist's fee, which he thought should not be higher than that of his family physician, and he was likely to end with trying to evade the fee of the general practitioner. The way to overcome the abuse of medical charities by the poor, who constituted nine tenths of the population of New York, was to charge them only what they were justly able to pay, and this he regarded as not unbecoming the dignity of the profession. Speaking of specialists, he said there were those who were evolved from among the general profession, and their interests and those of the family physician always remained common: there were others who were evolved not from general medicine, but, as it were, from the raw material. These never had much interest in general medicine, and general medicine could not have much interest in them. He thought it was to the interest of the society to exercise the greatest liberty in the election of members, and to keep no physician out unless he was known to be bad. Once in the society, however, each member's conduct in things of common interest became a matter of special solicitude.

NEW YORK ACADEMY OF MEDICINE.

Meeting of December 2, 1886.

The President, Dr. A. Jacobi, in the Chair.

A Phthisical Lung Injected with Carbolized Iodine.—Dr. J. Blake White presented a phthisical lung into one cavity of which he had made three injections of carbolized iodine, which caused an improvement in the patient's symptoms. Intra-pulmonary medication in consumption seemed to be a very rational treatment, and experience thus far had demonstrated that it was. Of the various solutions which might be used, his personal preference had been for a combination of carbolic acid and tincture of iodine, to which was added a small amount of morphine and atropine. With proper precautions, the least amount of irritation followed the use of this solution. In his case the cough was largely controlled, the expectoration was lessened, the night-sweats were checked, the appetite was improved, suppuration was diminished, and cicatrization was promoted. The first injection was made about July 19, 1886, and consisted of ten minims of carbolized-iodine solution, injected into the cavity in the left lung through the first intercostal space. The second injection was made the following week, and the third injection, consisting of twenty-five minims of the solution, was made a few days later. No reaction followed, but the improvement mentioned was noticed. The speaker's term of service in the hospital having expired, the injections were discontinued. The patient died six weeks later, when the condition of the lung was verified at the autopsy.

Intubation in Laryngeal Diphtheria.—Dr. W. P. Northrup read a paper in which he first referred to the attempts made by Bouchut, of Paris, to introduce to the profession a method of intubation of the larynx. A New York physician, Dr. O'Dwyer, without a knowledge of Bouchut's efforts, had been led by an unusually great mortality after tracheotomy for laryngeal diphtheria to experiment upon the cadaver, and develop a successful method of intubation of the larynx. Before speaking of the treatment, the author gave a summary of the records of all the cases of death from laryngeal diphtheria in the New York Foundling Asylum during the past five years. The number of children in the asylum during that period was 1,800, 1,100 being under the immediate care of nurses in and about the institution. Eighty-seven had died of laryngeal diphtheria. The average age was two years and seven months. The number of patients dying under one year of age was thirteen; between one and two years, nine; between three and four years, thirty-six. Fifty-six of the eighty-seven cases began with symptoms indicating that the membrane made its appearance in the larynx, either before or simultaneously with its appearance in the pharynx. In thirty-one cases the average number of days before symptoms of croup appeared was two and a fourth; in fifty-four cases the average time from the beginning of croupy symptoms until death was three days and four fifths. Twenty-two cases accompanied or followed measles; eight, scarlet fever; and one, varicella and scarlet fever. In fifty-four cases there was pneumonia. In most of the cases where the lesions were not plainly declared, a diagnosis had been based on microscopical and post-mortem examination. The question of pulmonary collapse and pneumonia had been constantly in mind, and signs of parenchymatous inflammation had been present as a rule. It would fall short of the truth to call the condition of the lung a bronchitis, and still further short of the truth to call it collapse; the lesion was broncho-pneumonia. In considering the cause of death when there was such a complication of lesions—sepsis, bronchitis, pneumonia, and nephritis—there was little satisfaction in attributing it to any one of them alone. Twenty-seven of the patients were believed to have died from extension of the diphtheritic process into the bronchi; twenty-nine had sufficient pneumonia to account for death. The distribution of the membrane was as follows: In nine cases it extended from the tip of the nose to the finest bronchi; in six, from the nose to the bifurcation of the trachea; in seventeen, from the pharynx to the finest bronchi; in seventeen, from the larynx to the finest bronchi; in seventeen, from the pharynx to the main bronchi; in seventeen, it was situated in the larynx and trachea; in three, in the pharynx and larynx; in one, in the larynx only. Interstitial emphysema was found in eight cases; pronounced vesicular distension in nine. The interstitial emphysema was located principally in the anterior portion of the upper lobes and the roots; the vesicular, mainly in the anterior portion of the upper lobe. It might be remarked that interstitial emphysema had been met with quite as often in babies who had died of inanition as in those who had died of any other affection than whooping-cough.

The author then exhibited and briefly described a set of O'Dwyer's tubes and instruments with which to insert them and take them out, and explained how best to use them. [Relating to this matter, the reader should consult previous numbers of the Journal.] The advantages and disadvantages of the tube might be stated as follows: Intubation would relieve dyspnœa due to laryngeal stenosis; there was no objection to its employment on the part of parents and friends; the operation was comparatively simple, and free from danger and shock; no anæsthetic was used; no trained assistant was required; no fresh wound was added; the subsequent care of the patient required no trained attendant; the inspired air entered the lungs moist and warm; intubation did not preclude tracheotomy, and the tube might be found useful as a guide on which to cut in performing this operation. Intubation had one fault; it sometimes interfered with the swallowing of liquids. As a rule, however, the child learned to swallow fairly well. There was one danger, illustrated in one published case, consisting in pushing the membrane before the tube and blocking the trachea.

One hundred and sixty-five cases, carefully reported and well attested, showed that it did overcome laryngeal dyspnœa promptly and effectually. That it possessed advantages over tracheotomy was indicated by the fact that twenty-eight and a half per cent. of the patients on whom it had been practiced had recovered. This method was believed also to offer advantages for overcoming other forms of laryngeal dyspnœa.

Dr. Francis Huber had done intubation of the larynx in eleven cases of laryngeal diphtheria, and in all there had been advanced stenosis; some of the patients were moribund when the tube was inserted. Four of them had recovered; one was still wearing the tube; the others had died. This was a much more favorable experience than he had had with tracheotomy, only two out of twelve patients having recovered after that operation. He called attention to one possible danger when removing the tube. In one case, when he attempted to remove it, the child coughed and vomited each time he touched the glottis with his finger. He learned that it had just been fed. Fearing some of the food might enter the larynx through the tube, he waited and removed the tube after the meal had been digested. He then found that his fears had some foundation, for a little of the vomited food was found to have entered the tube. Dr. Denhard, he said, had had eleven cases, five of which had ended in recovery.

Dr. A. S. Hunter had performed intubation of the larynx in two cases seen in consultation, and in one of them the tube had been reinserted by the attending physician. The relief from dyspnœa had been very satisfactory in both cases, but the final result had been fatal. The patients had been better able to take milk in considerable quantity, and he suggested that others might find this to be true.

Dr. Partridge said that the danger of occluding the trachea by pushing the membrane before the tube was seen not alone in intubation of the larynx, but also in inserting the tube after tracheotomy.

NEW YORK SURGICAL SOCIETY.

Meeting of November 22, 1886.

(*Continued from page 692.*)

Contraction of the Palmar Fascia.—Dr. Wyeth presented a patient upon whom he had operated for contraction of the palmar fascia and fixation of the tendon of the superficial flexor of the ring finger to this fascia. The following history was given:

W. R., seventeen years of age, had fallen on a piece of glass on June 15, 1886, and had received a wound in the palm of his hand. This had been followed by contraction of the palmar fascia and of the superficial tendon of the ring finger of the left hand. He was seen by Dr. Wyeth five weeks before the time of the meeting, and his finger was found to be drawn down in contact with the palm and was incapable of being extended, although there was limited motion. An Esmarch bandage was applied and 60 minims of a four-per-cent. solution of cocaine were injected into the hand in the line of the proposed dissection. When the contracted tendon was exposed it was found to be adherent to the palmar fascia. These adhesions were divided and the fingers were restored to their normal position. The operation was perfectly dry and painless. There was marked abduction of the little finger caused by injury to the flexor minimi digiti which had been severed at the time of the accident. To correct this deformity a second cocaine operation was done and about one inch of the abductor minimi digiti was excised, enabling the patient to carry his finger into line. He used the palmar interosseous muscles to a certain extent, and had some adduction in the little finger and perfect motion in the finger which had been bound down.

Prophylactic Arterial Ligation.—Dr. Pilcher presented a woman, the history of whose case he had reported about a year ago, the case being one in which a simultaneous ligation of both the subclavian and internal jugular veins had been done for a wound sustained during an operation for the removal of a carcinomatous glandular tumor at the base of the neck. A year and a half had elapsed since the operation, and the speaker considered the ultimate result of such an interference with the blood-supply to the upper extremity very interesting. Amputation of the breast for carcinoma had been done first three years before. The disease, however, had again appeared in the axilla and at the base of the neck above the clavicle. The veins had been torn in the attempt to enucleate the tumor in the last operation. In consequence of the great turgidity of the veins of the extremity that had immediately followed the ligation, the axillary artery had been ligated high up. This had been followed at the end of a week by considerable œdema of the arm, which had persisted for several weeks, but had finally left the arm, as it then appeared, of a somewhat increased size when compared with the other. The tissues of the arm seemed to be more succulent. There had been no recurrence of the disease since the operation, and the patient was apparently well.

Reference was made to a case that had been reported in one of the Russian journals in which simultaneous ligation of the subclavian vein and artery had been done to arrest hæmorrhage from a blind cut that had been made in an attempt to enlarge an abscess sinus for the introduction of a drainage-tube. The result in this case had also been good, but, during convalescence, it had been complicated by suppuration of the shoulder and elbow joints. The speaker knew of no other case on record of the simultaneous ligation of the internal jugular and subclavian veins, the case just referred to being the only one of a similar nature so far as the simultaneous ligation of the main vein and artery at the root of the arm was concerned.

In reply to a question by Dr. Stimson, Dr. Pilcher said that there were two rents. To Dr. Sands's inquiry as to where the ligatures were placed, he replied that they were placed on either side of the rents in both veins.

Dr. Lange said that about an hour before he had had the mishap to open the crural vein immediately below Poupart's ligament, at the entrance of the saphenous vein, while extirpating a malignant tumor of the groin. The edges of the wounded vein were drawn together with catgut sutures, but the lumen of the vessel was not included. A complete and perfect closure was effected in this manner. There was but little loss of blood. A lateral ligature did not hold in this case, the walls of the vessel being thickened and resistant.

Dr. Wyeth said that the condition of the arm in Dr. Pilcher's patient reminded him of a case in which he had removed carcinomatous glands from the axilla during an operation for removal of cancer of the breast. The carcinomatous tissue was studded along the axillary vein so closely that, in order to remove all the diseased tissue, he was compelled to ligate this vein and one of the branches emptying into it, and exsect the part from just below the clavicle down to the brachial region. The patient had recovered, and, although the circulation of the arm on that side was good, there had resulted the same flabby condition of the forearm as was observed in Dr. Pilcher's patient; but the woman had very useful arms for sewing and light work. He had seen her within a month, more than two years after the operation, and she had the first symptoms of a return of the disease in the glands of the neck and in the lung.

The President asked Dr. Pilcher if he believed that ligation of the artery would diminish the chances of œdema.

Dr. Pilcher replied in the affirmative, and stated that in his case the conditions had been peculiar, as not only the veins of the axilla had been cut off, but also the veins of the shoulder, the transverse cervical and the supra-clavicular veins. There had seemed, therefore, to be nothing but the capillaries through which the blood could return to the trunk.

Tumor of the Superior Maxilla.—Dr. Stimson presented a girl thirteen years of age, whose disease had first been noticed three years and a half ago as a small swelling on the front wall of the left antrum which had increased slowly for two years, and then more rapidly during the last eighteen months. An operation for its removal had been undertaken two years ago, but abandoned because the tumor had appeared to be solid bone. The growth involved the whole of the left side, and all the right side except the floor and margin of the orbit. The nose was deflected to the right, and the line of the incisor teeth was an inch and a half in advance of that of the lower jaw. The mouth was constantly held partially open because of the growth; this appeared bony, hard to the touch, and unyielding to pressure, and the concavity of the roof of the mouth had given place to a convexity most marked on the left side. But few teeth were left in the upper jaw; there were three superficial ulcers on the roof of the mouth; the mucous membrane in front was injected and deeper in color than normal. The speaker then asked the society for a careful examination of the case, and their opinion as to the nature of the growth and the advisability of an operation.

Dr. Hutchison felt reluctant to express an opinion of the case without a more thorough examination. It appeared to be a bony tumor malignant in character, and it was questionable whether it could be completely removed without too great a risk of death from hæmorrhage, and if it was not wholly removed it would probably speedily return and prove fatal.

Dr. Sands said that he should doubt the fact of the tumor being bony; he rather thought it a mixture of bone and other tissue, probably sarcomatous. He could not decide from the present examination that any vital part was involved. He thought an operation would be hazardous, but the case without an operation would be fatal, and, as the skin was not involved, he should try to remove the growth.

Dr. Wyeth thought that it was an osteo-sarcoma, but would risk an operation.

Dr. Briddon said that he was rather inclined to think it was an enchondroma; he would not hesitate to recommend an operation, as anything was better than her present condition.

Dr. Lange thought it might not be a very malignant tumor, but might be a mixed sarcoma; the case indicated an operation, and it was a very favorable one, the only danger being from loss of blood, which might be great, but he thought that with proper precaution, including temporary ligature of the carotids, the removal of the jaw would not only be feasible, but give a comparatively good result. He also called attention to the fact that the tumor did not seem to have so much tendency to grow inward to the base of the skull as it had to grow outward. He did not think there would be much difficulty toward the ethmoidal bones and in the posterior nares.

The President (Dr. McBurney) thought it could be operated on with success. He should very much like to see a careful preliminary tracheotomy before the operation. He believed that, with a thorough plugging of the whole pharynx, pressure upon the carotids without ligation would be sufficient to control the hæmorrhage.

Dr. Lange said that he thought it would be very unsafe without compression by a ligature.

Dr. Wyeth asked if he understood that ligation of both carotids was advised.

Dr. Lange replied that he did advise it. That he would secure the artery by pressing it over a rubber tube, which could easily be done by applying just so much pressure as to entirely or partially interrupt the current.

Dr. Sands said that he could recall but one case in which the blood-current had been shut off in both common carotids simultaneously, and in that case fatal head symptoms supervened almost immediately; whether they would occur in this case or not he could not say, but he thought there would be a risk in performing such an operation. Moreover, in his opinion, hæmorrhage would not be controlled to any great extent by such a procedure. He mentioned a case in which he had removed a portion of the lower jaw, and in which secondary hæmorrhage had occurred from the internal carotid artery; a ligature had been immediately applied to the artery, but there had been no diminution of the bleeding, and it was only when a ligature had been applied above the bleeding-point that hæmorrhage had ceased. He would prefer, in Dr. Stimson's case, to trust to other means of avoiding undue loss of blood.

Dr. Wyeth did not think that the danger of immediate death from cerebral anæmia was so very great, there being a number of cases on record in which the patients had survived the deligation of both common carotid arteries, with a varying interval between the applications.

Dr. Lange remarked that the ligation should be done cautiously, passing the ligature around the vessel without tying it; as it was drawn tighter gradually, one could at any moment diminish the current as one chose; this he considered a much safer method, and the risk of mischief which would probably occur in digital compression would be avoided.

Dr. Stimson said that he thought it would dangerously prolong the operation to perform tracheotomy and tie both common carotids previous to the main operation.

Dr. Lange considered that the operation of tying the carotids would not occupy more than ten or fifteen minutes for each.

Dr. Stimson thought that it would require half an hour or more.

Dr. Lange suggested that it was not necessary to tie both simultaneously; it was only three days ago that he had been compelled to tie the common carotid for hæmorrhage from the mouth and tongue. He had asked this patient the moment he ligated the artery (this operation being done under cocaine) if he had any sensation of pain, vertigo, etc. He replied that he had not. There was certainly no noticeable disturbance of brain function.

Fracture of the Os Brachii, partly through the Epiphyseal Line; Interposition of Soft Parts; Operative Replacement; Recovery.—Dr. Lange mentioned the case of a boy, ten years old, who fell from a tree, about eight feet high, striking his right shoulder, seven weeks ago. On his admission to the German Hospital two days later, a fracture of the right os brachii was found immediately below the head. The lower fragment had apparently perforated the deltoid muscle and, with a sharp edge, was fixed within the deep layers of the skin without perforating it. In this way a distinct protrusion was formed on the anterior aspect of the shoulder, the elbow being thrown backward so that the axis of the bone was directed abnormally in front. There existed a very extensive extravasation of blood, but no general disturbance. It was quite impossible to release the lower fragment from its abnormal attachment. Even the skin was so tightly fixed to the bone that it could not be made loose. On the seventh day, after swelling and tension had markedly subsided, the patient was put under the influence of ether, but it was found impossible, by manipulations, to replace the bone. An incision was then made over the displaced fragment, the slit in the deltoid muscle was enlarged, and, by proper manipulations, efforts were made to bring the fragments into coaptation. The fracture itself presented the following condition: There was separation exactly in the epiphyseal junction as far as the middle of the bone; from there the line of fracture went in an oblique direction downward and backward, its lowest point being about two inches below the level of the epiphyseal line. In order to bring the fragments into proper apposition, it was necessary to elevate the arm above the horizontal line and to give it a decided outward rotation, at the same time bringing it slightly forward. The periosteum and fibrous attachments on the edge of the upper fragment were not torn exactly in the line of fracture, but at a short distance below, so that they overlapped the edge of the upper fragment and had to be turned upward. We found a similar condition of things in fractures of the patella. The periosteum had to be slightly indented, and then the coaptation of the fragments could be effected. The long tendon of the biceps was not torn, but lifted out of its groove and dislocated to the inner side. With the lower fragment, it returned to more normal anatomical relations. The wound, after some days of rather high temperature, but without other general disturbance, healed kindly. For some time after the removal of the drainage-tube bare bone could be felt, the periosteum, of course, having been lifted off the lower fragment to a great extent. But no necrosis occurred and complete cicatrization had taken place.

The case was very convincing, in that the upper fragment, by the action of the muscles inserted into the tuberculum majus, was abducted and rotated outward; consequently, during the after-treatment the corresponding position of the arm was maintained, with slight extension, and a splint, which passed from the posterior aspect of the arm over the back to the opposite scapula. Recently this way of treating fractures of the uppermost portion of the humerus had been recommended by Bardenheuer. It confined the patient to bed for a long time, but it certainly secured the physiological relation of the fragments. Very shortly after this operation was done, a man was admitted to the German Hospital who had a fracture of the surgical neck of the os brachii. He was treated on the same principle; was kept in bed for nearly five weeks; during the last week the arm was gradually brought down, and, though the patient was discharged before complete recovery had taken place, it could be seen, from the comparative freedom of the movements in the shoulder at that time, that the case would yield a very good final result.

From these two observations the speaker felt entitled to recommend Bardenheuer's method of treating fractures in the upper part of the arm. In fractures of the upper third of the thigh he had for a number of years past followed a similar principle, and had every reason to be satisfied. The object in treating fractures was at all times to bring the fragments into a position most similar to the normal. If the upper fragment was not under our control, concessions must be made with the lower.

(To be concluded.)

BROOKLYN PATHOLOGICAL SOCIETY.

Meeting of May 13, 1886.

The President, Dr. B. F. Westbrook, in the Chair.

Dr. A. H. P. Leuf, Secretary.

Foreign Body in the Rectum.—A specimen was presented by Dr. S. Hendrickson, who said that, as the patient from whom it was removed was not his, he was unable to furnish a complete history of the case. It was shown to the society for the purpose of gaining information as to its nature, its appearance being different from anything previously observed by him in alvine discharges. The subject was a lady, about fifty-five years of age, of spare habit and a very small eater. The speaker understood that she had been in rather delicate health for several years, and had been annoyed by a feeling as if of something moving in the stomach and upper bowels, and there had been occasionally some pain. She had frequently taken cathartic medicine. Recently her physician, with the idea that it might be a case of tape-worm, had given her a teaspoonful of the oil of male fern, which caused the passage of the material shown in the specimen. The appearance of the specimen was that of irregular shreds of skin of varying thickness, such as are frequently voided in cases of intestinal worms. An interesting feature in the specimen shown was that clusters of elongated, spindle-shaped bodies of regular form, and from one quarter to three eighths of an inch in length, were growing out from various portions of the muco-fibrinous masses. These clusters were translucent, and resembled the cells of orange pulp, except in their attachment, and also in being more pointed at the distal end. A careful microscopical examination of them had not been made, but macroscopically they seemed to be surrounded by a capsule, to be without a nucleus, and to have a somewhat regular striated structure internally. The speaker regarded them as some variety of vegetable parasite.

Dr. A. H. P. Leuf referred to a similar specimen that he had presented to the society on a previous occasion. It had been sent to him for diagnosis from Fort Laramie, Dakota, and came from the rectum of a female patient who had suffered from a rectal disease for a period of two years. It had been removed while the patient was under the influence of an anæsthetic, and it was rolled up like a cylinder. Various opinions as to its character had been offered by members of the society, some suggesting that it was fish skin. Careful examination, however, had shown it to be the framework of an orange or a lemon. The speaker suggested that Dr. Hendrickson's specimen might be of the same nature.

The specimen was referred to the Committee on Microscopy, who, at a subsequent meeting, reported that it was the stroma and framework of a tropical fruit belonging to the lemon family.

A Convenient Form for Administering Paraldehyde.—Dr. R. G. Eccles said that, after considerable experimentation, he had determined upon the following as being the least disagreeable way of administering paraldehyde:

℞ Paraldehyde,
Almond-oil..................each, ℥ij;
Chloroform......................♏x;
Oil of cinnamon...............♏ij.

One half to be taken at bedtime, and the remainder during the night, if required. He said that it agreed with the stomach, and would often settle one that was unsettled. It could be taken undiluted.

Meeting of June 10, 1886.

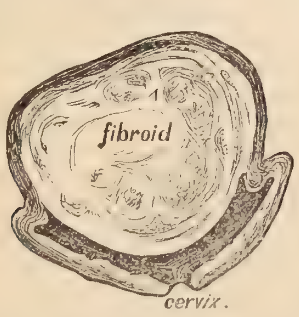
The President, Dr. B. F. Westbrook, in the Chair;
Dr. A. H. P. Leuf, Secretary.

Notes of a Case of Submucous Fibroid of the Uterus.—Dr. A. H. Buckmaster reported the following case:

Mrs. S., forty-four years of age, had maintained good health since the birth of her last child, sixteen years ago, until within a short time of her death. A few months ago she noticed a lump in her abdomen above the symphysis, and in the median line. She flowed more freely after the discovery of the tumor. Four months before her death she flowed profusely, and it was on account of the weakness incident to the loss of blood that she sought medical aid. Her appearance attested her statement of severe hæmorrhage. She presented the white lips and yellowish-white skin supposed to be indicative of malignant disease, but accompanying so many conditions associated with blood impoverishment. Physical examination revealed the fact that the uterus was enlarged to the size of a cocoanut; the os was slightly dilated; and the diagnosis of a submucous fibroid was made. It was determined to build the patient up by careful attention to diet and personal hygiene as soon as possible, secure full dilatation of the cervix, and remove the mass. Dilatation was accomplished by the introduction of the tip of the forefinger into the os, holding it there and pushing gently for ten or fifteen minutes. This was repeated every day, and after the fifth or sixth time the forefinger could find an easy entrance, and a thorough exploration of the uterine cavity was accomplished. It then became evident that the growth was attached by a very broad base to the upper half of the uterus. A few days after full dilatation was secured, the patient died suddenly from cerebral apoplexy, and to this circumstance was due the opportunity of examining a very interesting specimen.

The difficulties of diagnosis in these cases were slight, but their proper treatment required much skill. While fibroids were in themselves innocuous, yet by causing displacement by their weight, by interfering with the functions of the pelvic and abdominal organs by their size, and by causing a dangerous anæmia from the constant drain of blood which so frequently was the only symptom of their presence, they became of great interest, and consideration of the best method for their removal assumed the utmost importance.

The speaker had hoped to demonstrate in the specimen presented a practical point concerned in its removal, but the alcohol had so changed the condition of the tissues that it was impossible. When the specimen was examined in the recent state, it was found that the weight of the fibroid had caused an invagination of the uterine wall as shown in the accompanying illustration. By this it might be seen there were two sulci, one representing the line of detachment between the fibroid and the uterine wall, the other but a fold in the uterine wall. If a cutting instrument were used to enucleate the tumor, it would be the easiest thing in the world to stray into the wrong opening and cut through the uterus. A number of distinguished gynæcologists had met with this sad accident, and the care required when sharp instruments were used was generally recognized.



The speaker said that he would have to ask the society's credulity on another point. The connective tissue between the fibroid and its uterine attachment could easily be broken down with the finger. He thought the tumor would have separated spontaneously had the woman lived a few weeks longer, and, if some ardent investigator had been using ergot, an excellent case would have spoken in favor of this dangerous remedy. No cutting instrument of any nature was needed, and, where the finger would not reach, a dull curette, or a Hunter's or Sims's depressor, would have answered the purpose admirably.

Yet another point of interest was in relation to the softening of the cervix. When the patient was first seen there was a large mass in the uterus, yet there had been no pains indicating any long-continued uterine effort. The irritation produced by the finger established this effort and the softening and dilatation *pari passu*. It was probable that, as the fibroid was protruded from the wall, there were attempts at expulsion, but, as the adhesions were too strong to permit this, the uterus became reconciled to its guest, and remained quiet until the treatment to produce dilatation commenced.

The speaker acknowledged the kindness of Dr. T. G. Thomas in regard to the publication of this case, which occurred in his service at the Woman's Hospital.

Dr. Thallon was reminded of a case he saw two years ago with a more happy termination. He found the patient in pain and with a mass protruding from the vulva. He considered it a submucous fibroid. He gave in repeated doses 40 minims of Magendie's solution, but without relief. The patient was a maiden lady forty years of age. He attempted to encircle the tumor, but it was so tightly impacted in the vagina that not even a silver probe could be passed between it and the vaginal wall. She was taken to the Long Island College Hospital, where she was operated upon by Dr. Skene. Even while the patient was anæsthetized it was not possible to encircle the growth. A V-shaped cut was made in its base and it was thoroughly gouged out. There was much hæmorrhage. The incision was closed and the écraseur applied. The pedicle was smaller than in Dr. Buckmaster's case. The tumor was so large, though, that it had to be taken out in sections. The uterus was so completely open after the removal of the growth that one could see the openings of the Fallopian tubes. The case had not been reported. It was the largest tumor he had ever seen removed *per vaginam*.

Dr. Jones inquired if any bad results followed Dr. Buckmaster's efforts at diagnosis.

Dr. Buckmaster did not think the dilatation caused death; that was due to apoplexy. As soon as dilatation was begun the uterus commenced to contract.

Cancer of the Uterus, Lungs, and Liver.—Dr. H. D. Bliss related the history of the case of Elizabeth H. M., forty-six years of age, English, married. She had had one child at term and one miscarriage. Her family history was good so far as was known, though exact information could not be obtained. The patient's own health had been good up to eleven years ago; she had been under treatment for ten years, and had considered herself an invalid for upward of nine years. She had been troubled with anasarca for a number of years, and had been tapped several times. She was again tapped while in the City Hospital in the early part of the year.

The following records were furnished by Dr. F. C. Raynor, house physician of the City Hospital:

January 22, 1886.—Patient has been sick since the middle of September; was first taken with cramps. On the 2d of November took to her bed, and had a severe attack of peritonitis. Was treated by a doctor who did not believe in giving opium. Directly following this attack the abdominal cavity began to fill with fluid, and is now markedly distended. Complains of great pain about the heart, can not retain food, and is in a very uncomfortable condition, as she has to sit propped in bed.

Treatment.—Infusion of digitalis, acetate of potassium, with a cathartic at night.

24th.—No special change. Had free movement, which relieved tension somewhat. Urine quite free. Tube-casts but no albumin.

25th.—Tapped patient this morning, and drew off fourteen quarts of fluid. Stood the operation very well and seems much relieved.

26th.—Pain in abdomen very severe this morning; is markedly tympanitic. Applied hot turpentine stupes and gave ♏ iij internally, with but little effect.

February 2d.—Can not retain food; unable to relieve the tympanites. The pain is severe at times.

10th.—Seems much improved, retains food well, says she feels stronger, but is still markedly tympanitic.

20th.—Not as well. Discovered a hard mass in the left iliac region which is tender to the touch.

March 1st.—From past history thought the bowels were loaded with fæces; gave ℥ j castor-oil in emulsion. This produced enormous evacuations. Repeated the dose at night.

2d.—Has had several movements since yesterday and feels decidedly relieved. Her stomach is very troublesome; vomits frequently. Put on the use of peptonized milk.

31st.—Laxatives have been used almost continuously. Has markedly improved; appetite good and eats everything now with relish. The ascites still marked, but does not seem to increase.

April 20th.—Drew off eight quarts and a half of clear serum with a trocar introduced in the median line. Patient felt much relieved afterward.

21st.—Patient appears brighter than usual this morning. Made a careful bimanual examination to-day and found a large, hard tumor filling nearly half the pelvis on the left side. The mass is connected with the uterus, the os being pushed over to the left, the vagina nearly occluded, the bladder very small, and the rectum somewhat encroached upon. There is also a small, hard, subcutaneous tumor in the right axilla with processes running out from it.

24th.—Takes her discharge.

On admission to St. John's Hospital, May 15, 1886, she was suffering from general anasarca and dyspnœa. The pulse was rapid and feeble; temperature normal; urine scanty, high-colored, and slightly albuminous; mental faculties dulled, and a very accurate history not to be obtained. On account of distension of the abdominal walls, palpation revealed but little more than nodular masses with slight tenderness in the right hypochondriac and left iliac regions. There was absence of respiration over the entire right lung, with complete flatness except at the apex, where it was thought there might be a cavity. There was flatness over the left lung at the base. The apex-beat of the heart was slightly above its normal position.

Dr. Skerry, house physician at St. John's, furnished the following condensed notes:

Treatment.—Infusion of digitalis, aromatic spirit of ammonia, tincture of chloride of iron.

May 18th.—On account of oppression, the patient was aspirated; seventy-six ounces drawn off in sixty-five minutes. There was some shock. Stimulants were given. Pain was experienced in the hepatic region and in the left iliac fossa, and a nodular mass is more easily felt in the latter locality.

19th.—Uneasiness is felt, caused by nausea and flatus. Bowels moved with difficulty by enema of ox-gall, oil, soap-suds, etc. Patient free from pain but restless.

20th.—Severe pain in iliac fossa. Pulse 140 and weak.

26th.—Aspiration again necessary, one hundred and twenty-four ounces being drawn off in seven hours, by capillary needle. No shock. Patient slept. Bowels moved by castor-oil.

28th.—Seventy-two ounces of fluid drawn off by capillary aspiration. Patient more easy.

June 2d.—Uneasy, very weak, crying out at times. Again filling up. Temperature normal. Pulse 146 and weak.

6th.—Sinking rapidly. No pain, but restless. One hundred and forty ounces of fluid drawn off. Desires solid food.

9th.—Gradually sank until she died at 4 P. M. Was comatose six hours before death.

Necropsy.—The body was of a sallow or pale-yellow color; not much emaciated. The abdomen greatly distended. A straw-colored fluid escaped from the mouth and nose. On making the long incision and opening into the cavity of the abdomen, large amounts of fluid escaped. The same thing occurred in the thoracic cavity on removing the sternum. The entire right cavity of the thorax was filled with fluid, the lung occupying a space not larger than one's fist, having no crepitation, being nearly a solid mass. The left lung was of about two thirds its normal size, being bound down by adhesions, the remainder of the cavity being occupied with fluid. The pericardium was only slightly out of its normal position, and contained about two teaspoonfuls of fluid. The heart was of proper size, the valves all closed normally, and, so far as noted, it was the only perfect organ in the body.

Abdomen.—The omentum was covered with numbers of gray nodules, from the size of a small pea to that of small marbles—probably one hundred and fifty to two hundred. The uterus was greatly enlarged, the fundus measuring about four inches across, turned to the left, and firmly bound down by adhesions to the rectum behind, to the bladder in front, and to the pelvic walls. In fact, all the pelvic organs were a solid mass so firmly united that it was impossible to separate them without tearing. The liver, slightly enlarged, contained from twenty to twenty-five steel-gray nodules of varying size, from that of a hen's egg to that of a goose's egg, and larger. The spleen was quite enlarged, and contained similar nodules, as did also the pancreas. There were pea-sized nodules on various parts of the intestines.

Kidneys.—The capsule was thickened, and easily stripped from the kidneys. Between the capsule and the kidney were a number of cysts. The cortical and medullary substance of the kidneys appeared, upon macroscopical examination, to be normal, and were not submitted for microscopical examination. Forty-eight quarts of fluid were removed from the body.

The following is the report submitted by the Microscopical Committee:

At a previous meeting of the society several specimens were referred to the Microscopical Committee. Among them were carcinoma of the uterus, liver, lungs, and spleen, all removed from the body of one patient.

I have the pleasure of presenting sections of these organs illustrating the varieties of carcinoma, and demonstrating the infiltration of the different structures, displacing or replacing the normal cells to such an extent that, without having seen the tissues from which they were taken, it would be impossible to say whether a specimen was cancer of the uterus, liver, or lung, the microscopical appearance simply showing the cancer elements to the exclusion of all other cells.

It is probable that in this case the morbid growth first originated in the uterus and secondarily invaded the other organs by propagation along the vessels and lymphatics, the lung being very rarely the seat of primary cancer, and the liver seldom, if ever, when consisting of multiple nodules, as in this instance.

It will be sufficient to describe a section from the liver, as the type of secondary cancer generally conforms to that of the primary growth. In this case all the specimens are of the scirrhous or hard variety. On looking through the microscope at the section of liver, instead of finding the normal liver cell we see a large amount of fibrous connective tissue, throughout which are scattered cells—some round, some fusiform, and others irregular polygonal. On moving the slide, spaces can be found where there is still partially transformed liver tissue, with liver cells in all stages of disintegration, dwindling away from the pressure exerted by the malignant growth.

In the uterine growth is found a similar abundance of fibrous tissue, with the same variety of cells. As no section was made to include the mucous membrane lining the uterus, no evidence of cancerous degeneration of the glands can be demonstrated. Scirrhus of the uterus is pronounced a very rare form of cancer, and its existence is denied by some authors; others hold that in all probability the primary condition is scirrhus, which, after a variable time, is converted into medullary by a proliferation of cells bursting the framework of the alveoli and forming large, soft masses. In the lung, the scirrhus has obliterated all traces of lung tissue. Pulmonary carcinoma is secondary to cancer of some other organ. It generally invades the pleura, studding this with nodules, and is accompanied by hydrothorax, as in this case. Comparing the scirrhus of the various organs, the appearances are identical, rendering it necessary to seek the particular structure to tell which is uterus, which liver, etc. Looking at the cancerous portions alone, differential diagnosis is impossible.

A. Brinkman, M. D.

The speaker said that there was here given somewhat in detail the history of a case of cancer probably of several years' standing, and, although it had been seen by a large number of competent physicians, yet, so far as was known, an accurate diagnosis had never been made ante mortem. There was a history of repeated attacks of peritonitis; but there was an absence of the local symptoms which were supposed to accompany cancer of the uterus, though this lack of symptoms might be accounted for by its being at the fundus and of the scirrhous variety. Another point that might be worthy of notice was that, although the patient was troubled with nausea and difficulty of retaining food on the stomach, yet, on section of the mucous lining of the stomach, it appeared normal, and the body was not emaciated, showing there had been good assimilation of food. The amount of suppuration, considering the size of the wound and the large cavity left by the enucleation of the axillary glands, had been surprisingly small. Bichloride of mercury—in a 1-to-15,000 solution—was used in the operation for sponging, washing the hands, instruments, etc., etc. The patient's mother and aunt had both had the breast removed for cancer, the former, as was ascertained, with a fatal result. The family history otherwise was good.

Scirrhus of the Breast.—Dr. Henry N. Read presented a specimen which had been removed from a widow thirty-two years of age. The patient had had one child ten years ago, and three miscarriages since. She had been a widow three years. Last Christmas she had first noticed a small, painless nodule in the lower part of the right breast. She had attributed it to injury received in her housework. No particular notice had been taken of it at first. The lump had grown rapidly, and after two months from its first appearance had begun to be painful, the pains being lancinating and shooting in character, gradually increasing in severity. About the 1st of April the skin had gradually become attached to the tumor, which before had been movable underneath. The glands of the axilla had then become involved; the pain had increased so much that the patient's sleep had been frequently interrupted.

The case was first seen by the speaker on the 10th of May, and a diagnosis was made of scirrhous cancer, and an immediate operation for its removal was advised. Dr. Rockwell was invited to see the patient, and confirmed the diagnosis and coincided in the advice for immediate removal. The operation was performed on the 19th of May with the assistance of Dr. Bartley, Dr. Skerry, and Dr. Hutchinson, and the entire breast was removed. The tumor was found movable, involving probably a third of the gland tissue, the skin adherent and the nipple retracted. Considerable hæmorrhage occurred, owing to the large size of the nutrient arteries and to the plethoric condition of the patient. The axillary glands were found much infiltrated and were all removed, together with the chain of lymphatics under the folding border of the great pectoral muscle. This part of the procedure was quite tedious and two hours were consumed in the operation. The patient being a large, fat woman, and the bosom correspondingly large, the removal of the entire breast left an enormous wound, which was closed with twenty-four stitches, and drained at the lower angle. Support was given by adhesive plaster and the parts were dressed with carbolized vaseline and marine lint. Union by first intention took place in the greater part of the wound, and at the time the report was made the opening had healed, except a portion about an inch and a half in length, and the patient was walking about the house with her arm in a sling. No shock and but little pain had followed the operation.

The Pathology of the Lymphatic Glands in Children.—Dr. Read also read a paper on this subject. [To be published hereafter.]

Book Notices.

Hand-book of Practical Medicine. By Dr. Hermann Eichhorst, Professor of Special Pathology and Therapeutics and Director of the University Medical Clinic at Zurich. Volume III. Diseases of the Nerves, Muscles, and Skin. One Hundred and Fifty-seven Wood Engravings. New York: William Wood and Company, 1886. Pp. viii–390. [Wood's Library of Standard Medical Authors.]

The third volume of Professor Eichhorst's hand-book is in no respect inferior to those that have preceded it. It is probably the best work that has appeared in Wood's Library of Standard Medical Authors. The translation is carefully and faithfully done. There are, however, occasional slips, as, for instance, when the author is made to say that the "third branch of the trigeminus contains only motor fibers." Had the translator put the word *only* at the beginning of the sentence, the author's meaning would not have been misinterpreted. These, however, are minor blemishes, and do not detract from the great value of the work. As we have remarked in regard to the first and second volumes, the style is concise to the point of abruptness; but the author's meaning is usually clear, and the student is greatly aided by the numerous cuts intercalated in the text.

Part First is devoted to the treatment of the diseases of the peripheral nerves. It is carefully written, full of instruction for the student, and exhibiting the author's great familiarity with the subject. The second part, on the diseases of the spinal cord, is particularly valuable. The third treats of the medulla oblongata; Part Four, of the diseases of the brain; and Part Five, of the disorders of the sympathetic.

The introduction to Part Four, in which we find some preliminary remarks upon the subject of the diagnosis of brain diseases, is written with great care, and abounds in useful information. In it are contained generalizations which serve as guides to the student in following the subsequent discussions of individual diseases.

Here, too, the cuts are of great assistance; while somewhat rude in their execution, they yet serve the purpose of fixing the attention, and enable one more readily to follow the anatomical details of the text. We recognize here some old friends from Henle, Ecker, and others, but the majority of the cuts are original. The section on the diseases of the muscles, though short, probably contains all that is definitely known in this department, and in the sixty-four pages allotted to dermatology will be found all that the average practitioner will ever be likely to read upon the subject.

Massage as a Mode of Treatment. By WILLIAM MURRELL, M. D., F. R. C. P., Lecturer on Pharmacology and Therapeutics at the Westminster Hospital, London, etc. Philadelphia: P. Blakiston, Son, & Co., 1886. Pp. vi–78. [Price, $1.]

THE author in this *brochure* does not presume to give a full account of massage and its therapeutic uses. He has attempted merely to impart a clear and concise idea of that valuable therapeutic agent, and to indicate in what diseases it may find its application.

Dr. Murrell was the first in England, by a lecture which was published in the "Lancet," to attract the attention of the profession to the value of massage in the treatment of infantile paralysis. That lecture evoked so many letters asking for information as to the details of the treatment that the author was induced to write the little book. He was the better prepared for the task in that he had spent the previous summer with Professor von Mosengeil in observing a number of patients undergoing that form of treatment at the hands of one of its best-known practitioners. The first five chapters are devoted to a description of the various manipulations that constitute massage, with a short history of its origin and development. The following eight chapters are taken up with the different affections in which massage may be found useful. The author dispels the popular idea that any one with a slight degree of practice may become a successful operator. Possessed of the requisite qualifications, such as a knowledge of surface and visceral anatomy and of physiology, a cheerful and sympathetic temperament, etc., the individual will require, at least, two years' training. The little book should be in the hands of every busy practitioner who, not having the time nor the inclination to consult lengthy treatises, wishes to know about a form of treatment that is rapidly growing into fashion.

On the Disorders of Digestion, their Consequences and Treatment. By T. LAUDER BRUNTON, M. D., D. Sc., F. R. C. S., etc. London and New York: Macmillan & Co., 1886. Pp. xvi–389. [Price, $2.50.]

IN these days of rapid book-making it is not often that the practitioner experiences a sense of gratitude on the appearance of a new book. The book forming the subject of the present notice affords an agreeable exception. Every scientific and rational practitioner will entertain a feeling of gratitude toward Dr. Brunton for having collected in book-form all the lectures and papers of his that have appeared during the period extending from 1873 to 1885. The title covers only a small portion of the subjects that are treated of, and, indeed, it would have been difficult to select a single title which would include all that receive consideration in the twenty-odd papers that make up the book. A chronological list of the papers is given, but the order followed in the book corresponds generally to the various stages in the processes of digestion, assimilation, and excretion. The only unfavorable criticism is disarmed by the remark in the preface, that, owing to the papers having been read at different times and before different audiences, repetition could scarcely be avoided. The collection will be particularly useful to the young practitioner, who will find in it a number of valuable practical hints which it would take him years to learn from his own observation. The older physician, also, will find much in it that will instruct him and which will impart to him a feeling of self-satisfaction, for he will learn scientific and plausible explanations of many empirical points he has acquired through several years' practice, and which were forcing upon him the unpleasant conviction that he did much after the ways and customs of charlatans.

Henke's Atlas of Surgical Anatomy. A Series of Plates illustrating the Application of Anatomy to Medicine and Surgery. Translated by W. A. ROTHACKER, M. D., Pathologist to the Cincinnati Hospital, etc. Cincinnati: A. E. Wilde & Co.

THIS volume of plates (quarto size) is in the main well executed. The shading is somewhat coarse, however, and the absence of color makes them less attractive than they might otherwise have been. Some of the sections exhibited are new and merit high commendation.

We note in the sagittal pelvic section the common error of placing the coccyx and sacrum in false relation to the level of the pubes—thus distorting the relative position of the organs and the bony points.

The scope of the atlas is sufficient to cover most of the surgical operations commonly performed, but it will be less valuable in medical diagnosis.

BOOKS AND PAMPHLETS RECEIVED.

Fifth Biennial Report (embracing the Twenty-first and Twenty-second Years) of the Kansas State Insane Asylum at Osawatomie, for the Biennial Period ending June 30, 1886.

Report of Experiments in Trap Siphonage at the Museum of Hygiene U. S. Navy Department, Washington, D. C. By Glenn Brown, Architect.

The Differential Diagnosis of Scrotal Tumors. By D. A. K. Steele, M. D., Professor of Orthopædic Surgery in the College of Physicians and Surgeons of Chicago, etc. [Reprinted from the "Journal of the American Medical Association."]

The Microbic Revolution in Surgery. By D. A. K. Steele, M. D., Professor of Orthopædic Surgery in the College of Physicians and Surgeons of Chicago, etc. [Reprinted from the "Western Medical Reporter."]

Report on the Purity of Ice from Onondaga Lake, the Erie Canal at Syracuse, and from Cazenovia Lake.

Reports on the Progress of Medicine.

GYNÆCOLOGY.

By HENRY C. COE, M. D.

Permanent Dilatation of the Uterus.—Vulliet ("Arch. de tocologie," Oct. 30, 1886) has submitted to the Paris *Académie de médecine* a paper setting forth a new method of dilating the uterine canal for diagnostic and therapeutic purposes which was thought sufficiently important to be referred to a committee composed of MM. Tillaux, Cusco, and Charpentier. The following is a brief abstract of their voluminous report: The advantage alleged by Professor Vulliet for his peculiar method is the opportunity which it gives to the gynæcologist to inspect the diseased endometrium and to apply medicaments directly to it. It is maintained that the dilatation can be kept up indefinitely without injury to the patient, no matter to what degree it may be carried. The *modus operandi* is briefly this: The patient is placed in the knee-chest position, the os exposed by the aid of a Sims speculum, and bits of cotton, saturated in an ethereal solution of iodoform (one to ten), are passed into the uterine cavity. These tampons, which vary in size from that of a pea to that of an almond and have each a piece of thread attached, are introduced by means of a sound, until the cavity and canal have been filled up to the os externum. After forty-eight hours they are withdrawn and a fresh lot is introduced, and this operation is repeated eight or ten times, until the cavity has become so dilated that it is visible throughout its entire length. Laminaria tents may be used to supplement the tampons. After a sufficient amount of dilatation has been obtained, an intra-uterine speculum, devised by M. Vulliet, enables the physician to explore the cavity, to make local applications, to remove intra-uterine growths, etc., with ease, and with the certainty that he is not working in the dark. Vulliet reports several cases in which chronic endometritis, cancer, and submucous fibroids, both polypoid and intra-mural, were successfully treated by this method; other gynæcologists are equally pleased with the results which they have obtained. The committee, after carefully reviewing the clinical evidence, decided that dilatation, as effected in the manner above described, was valuable not only because of the perfect view which was afforded of the interior of the uterus, but, above all, by reason of the fact that this dilatation could safely be maintained for weeks or even months, during which time the progress of the disease and the effect of the treatment were literally under the eye of the physician. So far from there being any reaction from the presence of the tampons, the patients were actually relieved by them; the uterus seemed to tolerate the foreign bodies perfectly. The explanation of this singular tolerance probably lies in the fact that the uterus, after trying during the first few days to expel the tampons (as shown by the colicky pains of which the patient complains early in the course of the treatment), gradually loses its tone and ceases to contract. The constant contact of the medicated cotton with the mucous surface secures thorough antisepsis, and provides against the usual risks attending intra-uterine manipulations. M. Vulliet's method opens up great possibilities in the management of a certain class of affections which have hitherto been treated empirically, if not blindly, and may introduce a new era in uterine surgery. The hope may even be indulged, add the committee, that the direct treatment of cancer of the endometrium will so far control that disease that cases in which hysterectomy is necessary will become less frequent. "If M. Vulliet's process is not suitable for all cases, it is at least harmless. On the other hand, all of the patients who have been treated according to this method have certainly been benefited. . . . *Primo non nocere*—this is the first, the grand principle in medicine. M. Vulliet's method is innocuous. The scientific standing of its proposer is a guarantee of the accuracy of his observations."

The Palliative Treatment of Cases of Carcinoma Uteri Unsuitable for Operation.—Gaches-Sarraute ("Nouv. arch. d'obstét. et de gynécol.," 1886, No. 3) thus summarizes his experience in the treatment of a series of inoperable cases of epithelioma: The patients were all treated at a dispensary at intervals of two or three days. A thorough antiseptic vaginal injection was first given, then all shreds of necrosed tissue were detached; tampons saturated with a solution of corrosive sublimate or chloral were next applied to the ulcerated surface, and the whole was freely powdered with iodoform. As a result of this simple treatment the affected parts assumed a healthy, granulating appearance, the discharge became odorless, pain and hæmorrhage were greatly diminished, and the general condition of the patients was visibly improved.

The Ætiology of Salpingitis.—Martin ("Ctrlbl. f. Gynäk.," No. 45, 1886), in a communication to the gynæcological section of the *Versammlung deutscher Naturforscher und Aerzte*, reports the results of his observations in 287 cases of diseased Fallopian tubes. In over one half of the number the inflammation simply began in and extended directly from the uterus; of the other half, fifty per cent. were of puerperal origin, five sixths were due to gonorrhœal infection, and one sixth to tuberculosis. The left tube was alone affected in 138 cases, the right in 58, and both in 91. Two forms of salpingitis are clearly distinguishable, *endosalpingitis interstitialis* and *endosalpingitis follicularis*; in the former variety the muscular coat of the tube is extensively involved, and eventually its peritoneal covering is affected, the epithelium and fibers being more or less destroyed; in the latter the entire wall is filled with numerous "follicular spaces," similar to those in the *portio vaginalis*. Secondary contraction of the inflamed parts results in the closure of the distal opening of the tube and the formation of characteristic sacculi. The entrance of micro-organisms (of puerperal sepsis, gonorrhœa, tuberculosis, or actinomycosis) is followed by suppuration. There is no peculiar pain characteristic of tubal disease, nor is menorrhagia a constant symptom. The prognosis is not so gloomy as it has been represented; the inflammation may subside and a perfect cure follow, so that the patient subsequently becomes pregnant. If palliative treatment is unavailing, "*and the symptoms are very severe, an operation is justifiable.*" Martin has operated sixty-two times. [This paper is a most instructive one, representing as it does the unbiased opinions of a prominent gynæcologist, who occupies a conservative position with regard to a question which has provoked a somewhat heated controversy. His calm, scientific manner of treating the subject can not fail to add force to the deductions which he draws from carefully observed anatomical facts.]

Removal of the Ovaries for Neuroses.—Schroeder (*ibid.*) speaks authoritatively on this question as follows: When the ovaries are diseased, there is no question as to the propriety of removing them; when it is necessary to extirpate them in order to anticipate the menopause, the presence of disease is a side-issue—the purpose of the operation will be attained whether they are normal or abnormal. Hegar, on the contrary, insists that the organs, "or other parts of the genital canal," must be the seat of pathological changes in order to justify the operation. We are ignorant to what extent neuroses are dependent on actual disease of the ovaries; serious nervous disturbances may disappear completely after the menopause (natural or artificial) in patients whose ovaries appear to be healthy. We do not, in fact, know how to draw a sharp line between the normal and pathological. It is certain that neuroses may exist in patients with healthy glands, and, furthermore, that the women are cured by removing them.

Miscellany.

The Bacillar Theory of Tuberculosis.—In certain papers recently read before the medical societies of Cincinnati, which, we understand, are to be published in the "Cincinnati Lancet and Clinic," Dr. R. B. Davy, of that city, has sought to show that the infection theory of tuberculosis is supported in every respect by the natural history of the disease. He does not lay particular stress on the *Bacillus tuberculosis*, but speaks of the poison rather as the "tubercular virus." He insists, however, that it is a creature of heat and moisture. From the facts that its appearance and extension are noticed to occur only in confined spaces, and that its disappearance is most favored in unconfined spaces, he concludes that the danger of infection depends more upon the quantity than the quality of the poison. After freely discussing the natural history and the climatic treatment of the disease, he comes to the following conclusions: 1. Tubercular phthisis occurs most frequently and most fatally in warm or hot regions characterized by a non-porous soil and the ordinary accompaniment of excessive humidity of the atmosphere. 2. It depends upon a specific organism, which can be made to produce the disease by inoculation. 3. The key to the introduction of this organism into the system, and its development there, is ordinarily some form of irritation. 4. The disease is plainly curable in all its forms except the acute, and even this may not always be fatal. 5. To the predisposed it is communicable by infection through the medium of a polluted atmosphere. 6. Infection depends upon the quantity rather than the quality of the virus. 7. On the open sea, where every condition favoring the development of tuberculosis is present, except the presence of tubercular spores, the disease speedily disappears. 8. The nearest approach to perfect immunity from tuberculosis is to be found on high mountains, where, on account of the extreme rarefaction and accompanying dryness of the air, the tubercular organism can not exist.

The Health of San Francisco.—According to the Health Department's "Condensed Statement of Mortality" for November, there were 452 deaths during the month, including 2 from cholera infantum, 40 from croup and diphtheria, 4 from cerebro-spinal meningitis, 1 from diarrhœa, 1 from dysentery, 11 from typhoid fever, 1 from whooping-cough, 3 from septicæmia, 1 from syphilis, and 2 from scarlet fever.

The "Journal of Cutaneous and Genito-urinary Diseases."—With the beginning of its fifth volume, our excellent contemporary the "Journal of Cutaneous and Venereal Diseases" will appear under the title given above, and eight pages of reading matter will be added to each number. The "Journal" announces the formation of an Association of Genito-urinary Surgeons, with a Committee of Organization consisting of Dr. Edward L. Keyes (chairman), Dr. Robert W. Taylor (secretary), Dr. F. R. Sturgis, Dr. C. M. Masten, Dr. A. T. Cabot, Dr. J. W. White, and Dr. J. N. Hyde.

"The Doctor" is the title of a new twelve-page, double-columned, semi-monthly "popular paper for physicians and their friends," owned and edited by Charles Avery Welles. The first number, dated December 15th, abounds in sprightly paragraphs.

THERAPEUTICAL NOTES.

The Influence of certain Drugs on Gastric Digestion.—Dr. Klikowicz ("Ctrlbl. f. d. med. Wissensch."; "Gaz. hebdom. de méd. et de chir.") has been experimenting by measuring the amounts of peptones and hemi-albumose produced on digesting a given weight of pure albumin in a solution of pepsin acidulated with hydrochloric acid, with the addition of various medicinal substances. He finds that fifteen per cent. of alcohol arrests the digestion, ten per cent. retards it, and five per cent. favors it in some cases and hinders it in others. Thirty grains of antipyrine do not affect it, and the same is true of sodium arsenate, potassium iodide, and potassium bromide in doses of from three quarters to nine tenths of a grain; but these substances, added to the amount of between fifteen and thirty grains, diminish the peptonization two thirds. Chloral hydrate does the same thing in the dose of thirty grains, and a like amount of sodium or potassium chloride arrests digestion and reduces the peptones thirty-seven per cent. Lactate and citrate of iron do not modify peptonization; reduced iron and sulphate and chlorate of iron hasten it; calomel diminishes it five per cent. when the amount used is from seven to fifteen grains. Forty grains of sodium sulphate diminish it forty-eight per cent.; magnesium sulphate, in the same amount, diminishes it from twenty-three to thirty-seven per cent., and, in double the amount, from forty-six to sixty per cent. Salicylate of sodium diminishes it fifty-two per cent. when the amount exceeds thirty-seven grains, and from fifty-two to ninety-three per cent. when double the quantity is added.

Sandal-wood Oil in Blennorrhagia.—Dr. Litzel, of Munich ("Allg. med. Ctrl.-Ztg."; "Brit. Med. Jour."), furnishes a somewhat detailed account of his experience of the use of sandal-oil and essence of copaiba in the treatment of this affection. He at first gave sandal-oil with extract of coffee, but, as at least half the patients showed extreme aversion to the drug, gelatin capsules were substituted, two or three capsules, each containing five minims, being taken three times a day. Of ninety-seven patients thus treated, four had gastro-intestinal disturbance; two of these had violent diarrhœa, and the other two severe dyspepsia. Eructations and burning sensations in the stomach were often noticed in the rest, but the use of the drug was continued. It should not be given on an empty stomach. One bad symptom, which occurred in five cases out of the whole ninety-seven, consisted in severe congestive pains over the kidneys. Louis Jullien, in his recent work on "Venereal Diseases" (Paris, 1886), speaks of this symptom, also of urticaria, as being not infrequent. Sandal-wood oil is much better tolerated than balsam of copaiba, and, if pain in the liver should arise, it suffices to discontinue the use of the drug, and order a warm bath. The use of about thirty minims daily is generally enough to give the urine a distinct odor of the oil. The capsules used were Grimault's (Paris) and Paulcke's (Leipsic). Both these makers sell the pure oil in their capsules. The general indifference and distrust toward sandal-wood oil are apparently due to the fact that, owing to its high price, it is extensively adulterated with copaiba balsam and castor-oil, so that the commercial article often contains only a small percentage of the genuine oil. Dr. Hager gives the following test of its purity: "Genuine E. I. sandal-wood oil (·0980 specific gravity) requires, to produce turbidity, from four to five volumes of dilute alcohol of specific gravity ·0889, added to a clear mixture of one volume of the oil and two volumes of absolute alcohol (·0799 specific gravity)." Dragendorf's test is simpler—namely, a solution of one part of bromine in twenty of chloroform. When from ten to fifteen drops of this solution are mixed with one drop of the oil, the color becomes a brownish-violet, and later on dark-blue. The pure oil is clear, light-yellow in color, and very pungent on the tongue; it has a slight odor of copaiba balsam. The results of treatment were these: 1. When it was given in an early stage, the secretion diminished rapidly, and the pain on micturition ceased. This result happened in thirty-seven out of forty-two cases. 2. If, after ten or twelve days, the use of the oil is discontinued, the old symptoms reappear. 3. The best results were obtained when the oil was first used in the third or fourth week of the gonorrhœa, together with the use of weak astringent injections. 4. Cystitis and gonorrhœal prostatitis were always greatly benefited by the oil. 5. Cases of gleet did best under local treatment.

The Action of Drugs in Albuminuria.—Dr. Robert Saundby, of Birmingham ("Brit. Med. Jour."), speaks favorably of the action of such diluents as Vichy water (Célestins or Haute Rive) and solutions of bitartrate of potassium, citrate of lithium, bicarbonate of potassium, and benzoate and bicarbonate of sodium. He has found the tannate of sodium of the shops so nauseous that he has used the following formula in place of it:

Tannic acid	10 grains;
Sodium bicarbonate	10 "
Glycerin	15 minims;
Water	1 ounce.

Digitalis, he says, appears to increase the amount of albumin, and this holds good of other heart-tonics, for example, caffeine, strophanthus, and sulphate of sparteine. Iron, including the acetate, sulphate, and perchloride, has the same effect. Terpine, in ten-grain doses, three times daily, in one case increased, in another did not diminish, the albumin. Apocynum increased the albumin in two cases, and diminished it in one. He has not observed the remarkable diuretic effect of this drug (used as the tincture in drachm doses) which is alleged for it in America. He has used turpentine in several cases without being convinced of any beneficial result, though hæmaturia followed the employment of even minute doses (one minim). The bichloride of mercury, recommended by Dr. Millard, of New York, and in use by the homœopaths, has had a fair trial in the doses suggested (gr. $\frac{1}{1000}$), but has entirely failed. Purgatives and diaphoretics, though of great value in its treatment, do not appear directly to influence the amount of albumin excreted in chronic Bright's disease.

Oil of Pinus Silvestris in Chronic Bronchitis.—The action of terebinthinate drugs on the mucous membranes has induced Mr. A. W. Robson, of Birmingham ("Brit. Med. Jour."), to try the *oleum pini silvestris* of the British Pharmacopœia in cases of chronic bronchitis. The dose given was five minims every four hours, and in some cases, where relief did not follow in forty-eight hours, it was increased to ten minims. None of the patients treated owed their bronchial affection to cardiac disease. Of forty-three cases, the cough complained of was eased in twenty-eight. The dyspnœa was relieved in twenty-eight, and the difficulty in expectoration was benefited in thirty-eight cases, this being the symptom that seemed to be most relieved. The ages of the patients varied from 50 to 70. In one case only did the drug fail to relieve one or more symptoms. Two patients complained of a fiery taste in the mouth, the hot sensation spreading subsequently all over the body; and one woman was obliged to discontinue its use, as she found it caused scalding urine and frequent micturition. In many cases where stimulating expectorants had failed, he has found it give relief.

A Method of Controlling the undue Local Action of Iodine.—M. Carles ("Jour. de pharm. et de chim."; "Union méd.") speaks of the painful effects and the protracted staining of the skin produced by tincture of iodine when applied too freely. For their mitigation, he recommends the application of alkaline solutions, such as weak ammonia-water or a sulphur salt of sodium, especially a ten-per-cent. or a one-per-cent. solution of the sulphide or hydrosulphide of sodium.

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